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BREAK THE VICIOUS CIRCLE IN CHRONIC CONSTIPATION

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A Discussion
ON
THERAPEUTIC MODIFICATION OF THE DIET IN INFANCY.*

BY
HECTOR C. CAMERON, M.D.CANTAB., F.R.C.P.LOND.,
Physician and Physician-in-charge of Department, Diseases of Children, Guy's Hospital.

DEBATES upon the subject of infant feeding seldom arouse profitable discussion. As a rule they serve to make clear only the difficulty of reconciling the views of those who might be supposed to speak with authority. Therefore, in the first place, I would ask the question: Wherein lies the difficulty and complexity of the subject? Why is it that in this subject, on the importance of which all are agreed, opinion has remained so fluid, and so little that is solid and concrete has crystallized out from it? Why is it that, in practice, we still encounter, on the one hand, a frenzied search among a host of proprietary foods for one which may act up to the promises of all, or, on the other hand, a too rigid adhesion to some one system of feeding, despite the persistence of symptoms.

Difficulties Inherent in the Subject.

It is obvious that some of the difficulties with which we have to contend are inherent in the subject itself. In the practice of infant feeding the data are difficult to interpret, for two reasons. On the one hand it is mercifully the nature of the child to wax and grow strong, and this upon a very great diversity of dietetic prescriptions. Yet the prescriber of each diet is prone to claim this most usual happening as evidence of success, and as proof of the virtues of his prescription. On the other hand, the human infant is of so sensitive a nervous organization that a great variety of adverse circumstances are capable of producing ill effects upon its health—effects which almost always manifest themselves in gastro-intestinal and nutritional disturbance.

The infant has but one function highly developed, that of the digestion and absorption of food. So hypertrophied a function is necessarily unstable, and, in the absence of other functions capable of manifesting symptoms of derangement, disorders of very different natures are apt to show themselves in the guise of digestive and nutritional disturbance. Thus intercurrent infective diseases, great variations in the atmospheric temperature or humidity, extreme restlessness from timid or uncertain handling or from overstimulation, inco-ordinate and ineffective suction with aerophagy, individual inherited idiosyncrasies against certain constituents of the food, are each and all capable of so lowering the tolerance for a diet, in itself quite unobjectionable, that severe dyspepsia may result. Because of the action of one or other of these adverse influences many dietetic prescriptions, in themselves admirable, are apt to fall into disrepute, and to bear the blame of a disturbance of which they have not primarily been the cause. On the other hand, since these influences are more often than not transitory in their action, many dietetic recipes, tried at the moment of recovery, bear off the credit for that recovery which was in fact quite unconnected with their use.

These difficulties are inherent in the study of the infant and of its diet, but in this country at the present time there are other difficulties with which we have to contend, and which are responsible in part for the confusion which surrounds the subject. I will briefly refer to three only.

The Neglect of the Study of Pediatrics in Universities and Medical Schools.

In medical schools and universities too little attention is paid to the scientific study of the child. The subject is regarded as a specialty. It struggles painfully for recognition among the conflicting claims of oto-rhino-laryngology, orthopaedics, and even proctology. We may be sure that only when it has been elevated to the rank of a subject of the first importance, and takes its place with medicine and midwifery as one of the trilogy of the final examination, can we hope to find the profession as a whole equipped as we would have it equipped to deal with so all-important a branch of general practice. Operative surgery, on the other hand, which occupies to-day so large a part of the student's time and attention, belongs rightly to the specialties. Its practice is a matter for post-graduate rather than undergraduate study, and its technique can only be usefully acquired by the special training of some of those who have already received a medical education. The dearth of professorial chairs in pediatrics in this country is both symptomatic of and productive of the widespread neglect of the subject.

Detrimental Effect of the Advertisements of Proprietary Foods.

To the lay mind the proof of the pudding is in the eating. Digestive derangement, however caused, is taken as indicating that the particular diet adopted is responsible for the disturbance, and a change is demanded. One food after another may be tried in an unmethodical search for something which "suits." The numerous advertisements of proprietary foods are cleverly designed to play upon the anxieties of the mother. Their effect in producing this constant demand for change and in increasing our difficulties is not lightly to be set aside. Nothing is more amazing to-day than the success of advertisement in a population trained to read but not to reason. The latest device is the advertisement in the form of a Socratic dialogue—hitherto confined to the vendors of cheap furniture—under a picture of the kindly doctor with his arm resting reassuringly on the shoulder of the distressed young mother, while he extols the virtues of the food, and she dutifully undertakes to follow such good advice.

These foods are to some extent the raw materials of the physician's art. Their virtue lies in the uses to which they are put, not in their composition. Many owe their origin to successful prescriptions in the past for particular types of disturbance. Commercially, however, there is little profit to be made by putting on the market a diet for sick infants only, hedged by restrictions and indications for and against its use. It is more profitable to make the claim of universal applicability, based on selected cases which have undoubtedly thrived by their use.

Ill Effects due to Misunderstanding of Propaganda for Infant Welfare.

The appreciation of the disastrous effect of these repeated and injudicious changes of diet in the dyspeptic disturbances of infancy has led some to go to the opposite extreme, and to maintain that, by a rigid adhesion to some particular formula or scheme of feeding, success can always be attained, at least in what is called a "well baby." This is the attitude which has been associated, to take one well known example, with the name of Sir Frederick Truby King. He says in effect: "Give me a healthy baby, and I will show you how to keep it healthy." If we were to ask him he would say: "With sick infants I have nothing to do. My work is preventive, not curative." He rightly regards the preparation and supervision of the diet of the healthy infant as falling within the province of the educated mother or children's nurse, supervised and instructed, if need be, by the trained nurse or infant welfare worker. No one can fail to admire the enthusiasm which he has thrown into his work and the energy with which he has conducted his extensive propaganda among mothers and nurses. But propaganda upon matters of health is by no means free from danger to the public. There is, indeed, at the present time an attempt on the part of certain medical men to enlist the services of the lay press in bringing medical knowledge to the notice of the public. Those who oppose the suggestion and are fearful of its effects may well point to certain unhappy results which have followed on the propaganda for infant welfare. No one branch of medicine has been so subjected to this process of popularization. For popular consumption propaganda must be so simplified that the truth is

* The opening paper of a discussion in the Section of Diseases of Children at the Annual Meeting of the British Medical Association in Edinburgh, 1927.

almost squeezed out of it in the process. An outline, a mere diagram, is all that can be depicted, without light or shade, without degrees of emphasis, and without consideration of exceptions or variation. Hence we find that the successful propagandist is seldom himself expert. Late in life a surgeon, supreme in his art, turns dietitian, or an asylum superintendent devotes his later years to the standardization of infant feeding.

All standardization is detrimental to the progress of medicine, although it immensely simplifies elementary teaching. The effect of standardization in this instance, although certainly not its aim, has been to tend to leave the doctor out as one no longer needed. The public has become confused. It hears the Truby King or some other "system" of feeding extolled as giving admirable results. Why should these great benefits be confined to healthy infants? The mother of some ailing child demands that it, too, should share in them. And so it comes about that ailing infants are admitted to institutions which were designed only for preventive work, and that mothers and nurses come to regard the standard diet—which I should look on much as a sighting shot, to be persisted in only if successful—as conferring health on all dyspeptic infants.

If it were possible to feed all infants, healthy or sick, in the same way, it would indeed be true that the subject could have no possible interest for medical men. The nurse, trained in the preparation of the particular diet, would then rightly take charge. The routine dietetic treatment, known beforehand, is then all that is required, beyond that skilled nursing and handling which every baby needs, and which is, in truth, the irreplaceable and all-important contribution of the trained nurse. Indeed, under a standardized system it is not necessary before giving advice to see the infant at all, or to make any examination of it. In one of the largest institutions for infant welfare it is considered possible to manage the whole business by letter. The matron conducts a consultation department known as "Better Babies by Post." From all over the country mothers write describing the symptoms from which their babies are suffering, and question and answer are published in the lay press. The child may be overfed or underfed, it may have pyelitis, or it may be suffering from injury to its medulla oblongata at birth—no one knows, but the advice by post, a little stereotyped perhaps, but simple and legible, is always to be obtained. Such happenings bring discredit upon a subject the welfare of which all of us have very much at heart.

We need, I think, above all the elevation of pediatrics, as the most truly educative of all subjects, as well as one of the most important in practice and for the service of the State, to a more important place in the curriculum. I would welcome, too, some restriction on the trade in proprietary infant foods, and in the character of their advertisements. The difficulties of the infant welfare movement will right themselves in time. In time the public will learn not to confound sensible advice on the care and diet of a healthy infant with the therapeutics of the sick.

Therapeutic Modification of the Diet.

In the last twenty years much progress has been made in the attempt, based upon the study of the etiology of particular symptoms, to devise modifications which may suffice to control and correct disturbances originating upon the standard diet. In other words, if the sighting shot is unsuccessful we must seek to determine the nature of the error, and how it can be corrected. No doubt these therapeutic diets are for the most part to be regarded only as temporary expedients. By their use freedom from symptoms and a gain in weight, in vigour, and in well-being can often be achieved. But the ultimate aim must be to restore the child as quickly as possible to the standard diet of health. Only when it has demonstrated its power to thrive on the standard diet can we claim to have achieved complete success.

It is on this subject of the therapeutic modification of the diet that I especially wish to invite discussion. In order to open that discussion I choose three such modifications.

(A) High caloric feeding in post-infective dystrophy.

(B) Thickened feeding in the vomiting of aerophagy, nervous vomiting, and hypertrophic pyloric stenosis.

(C) Feeding with a high percentage of casein in fermentative diarrhoea.

[The opener discussed the results attained by these devices, illustrating his remarks by charts.]

Discussion.

Dr. DINGWALL FORDYCE (Liverpool) first referred briefly to breast-feeding. The quality of maternal milk was, in his experience, seldom at fault, and the most powerful factor in modifying it was nervous unrest and instability. Chemical tests were of little practical value, but occasionally bacteriological examination was of the utmost importance. The demonstration of *B. coli* in the milk of apparently healthy mothers had explained the unsatisfactory progress of three of his cases. The relation of diet to general health and constitution was a complicated problem. The late Dr. John W. Simpson had been among the first to use thyroid extract in the treatment of wasting babies, and his results were very good. In order to influence the thyroid function, and therefore the whole sequence of endocrine activity, it was not, however, necessary to administer the extracts of the endocrine glands; adjustment of the diet, particularly by modifying the nature of the carbohydrate and the amount of fat, could effect the desired result. Success in infant feeding could not be attained by rule of thumb. Each infant must be regarded as a patient with a constitution demanding study. Practical infant feeding could be learned only in the clinical atmosphere of the bedside and the home. The time must inevitably come when the subject of the feeding of infants as part of the larger subject of the medical care of children would receive adequate recognition in universities and medical schools. When it did, this in itself would largely counterbalance many detrimental effects associated with propaganda in favour of proprietary foods and misunderstandings in child welfare. With increasing knowledge therapeusis in childhood was joining hands with prophylaxis. When the subject was suitably recognized it was very desirable that development should take the form of a department for the medical care of children, and not be limited to the relatively narrow subject of therapeutics in sickness.

Dr. G. B. FLEMING (Glasgow) thought that hardly enough attention had been paid to the quantitative modification of the diet in infancy. In his opinion underfeeding was an extremely common cause of malnutrition. He considered that the average infant less than 6 months old required about 55 calories per kilo of body weight for basal requirements, 5 calories for growth, 5 calories to make good loss in the excreta, and perhaps about 35 calories for muscular exertion—a total of 100 calories per kilo. It had to be borne in mind that marasmus, atrophy, or decomposition did not represent a disease but a state of malnutrition. He had been interested in the problem of whether this malnutrition was the result of a too rapid utilization of nourishment by the atrophic child. Rosenstern first suggested that infants should be fed according to their age rather than their weight. Investigations on metabolism had thrown considerable light on this problem. It had been shown that the basal metabolic rate of the overweight infant was no higher than that of the normal, and also that there was little difference in the milder degrees of malnutrition. When, however, the infant was about a third below the average weight for its age there was a fall in the metabolic rate, and this became progressive as malnutrition proceeded. His conclusion as a result of these investigations was that, when an infant's weight was 70 per cent. of what it should be for the age, the requirement was 90 calories per kilo of expected weight instead of 100 calories. Beyond that point the calorie intake had to be further reduced proportionately to the fall in the basal metabolism and the diminution in

muscular activity. Roughly, a reduction of one calorie per kilo of expected weight should be made for every 1 per cent. the child was below 65 per cent. of its expected weight. Thus at 55 per cent. of expected weight the allowance should be 80 calories, and at 45 per cent. 70 calories per kilo of expected weight. In atrophy, then, it appeared that there was no excessive utilization of food and that the condition was brought about by one or both of the other causes of malnutrition—starvation or malassimilation. These considerations were useful in helping to avoid gross errors of under- or over-feeding.

Dr. LEWIS THATCHER (Edinburgh) confined his remarks to the use of acidified milk. In many feeding cases the food that was being given was deficient not only in total calorie content, but also in protein value. The reason for this was often not that the diet had not been recognized as deficient, but that all attempts to give an adequate quantity had been attended by signs of intolerance. In many such cases he had found acidified milk most valuable. There was nothing new in the use of acidified milk to meet this difficulty. Buttermilk had long been used, and Finkelstein's albumin milk was a mixture of buttermilk and extra curd. In practice, he thought that acidification was best brought about by adding an organic acid. He used lactic acid, as the method was not difficult and the degree of acidity was easy to control; 1 drachm of lactic acid (*B.P.*) was added to a pint of milk which had been boiled for two minutes and allowed to cool. It was important that the milk should be nearly cold, and be constantly beaten with a spoon or shaken up in a large bottle while the acid was added slowly, drop by drop. It was convenient to prepare the ration for the twenty-four hours at one time. The milk might be skimmed or whole, and carbohydrate, preferably in the form of dextrimaltose, added as considered necessary. It was better to give no more than five feeds, if sufficient could be taken at each feed. This allowed of more complete emptying of the stomach, and also of the administration of orange juice and water between feeds, a plan which was preferable to diluting the mixture. When the change over was taking place it was, however, wise, as in all modifications, to build up the diet gradually. Mothers could prepare the milk quite efficiently after a demonstration from the ward sister. There had been two main explanations of the undoubted benefits obtained: the first was that the coagulated casein salt was in a finely divided flocculent form, which passed easily into the duodenum; and the second, that the essential process was one of debuffering. Marriott and others had shown that the buffer value of cow's milk was much higher than that of human milk, which meant that about three times as much acid had to be added to it to change the reaction to an equal degree. The result was that in the process of digestion of cow's milk the hydrochloric acid in the gastric juice was used up for this purpose, and little or none was left for keeping the stomach contents at the optimum acidity for peptic digestion, stimulating gastro-intestinal motility, and killing off micro-organisms. The formation of a finely divided curd ought also to facilitate fat digestion.

Dr. L. G. PARSONS (Birmingham) agreed with the view that lactic acid milk was valuable in the treatment of certain types of case. He was in the habit of using milk modified by the growth of the *Streptococcus lacticus*; for his original culture he was indebted to Dr. Alan Browne of Toronto. He thought that this form had certain advantages, but the method of preparation was not so simple as that in which lactic acid was added; it was therefore less suited to out-patient and private practice. It was difficult to understand why sick and debilitated infants should thrive better on lactic acid than on other forms of acid milk. The fat and calcium absorption on lactic acid milk was not so good as on ordinary cow's milk, and the calcium absorption was considerably less than on hydrochloric acid milk. The probable explanation of its superiority was that it did not put so much strain on the acid-base balance as hydrochloric acid milk. Syörgy of Heidelberg had suggested that the value of lactic acid lay in the fact that it was synthesized to carbohydrate and stored as glycogen in the liver. Lactic acid milk was useful in cases of pyloric stenosis when breast milk was not available. In that condition, as a result of the loss of hydrochloric acid from vomiting, a state of alkalosis was liable to develop and lead to convulsions and a fatal termination. The importance of giving an acid milk both before and after operation was therefore obvious. There was no objection to giving lactic acid milk to newly born or even premature babies. It could be given also over prolonged periods. One patient had taken it, owing to an oversight, for twelve months on end with excellent results.

Dr. C. W. VINING (Leeds) associated himself with those who regarded underfeeding as an important cause of marasmus, and pleaded for a more general use of caloric measurements of food. At the same time it was desirable to keep feeding methods as simple as possible. The chief merit of the caloric method was that it offered a means of regulating and controlling food requirements. There was room also for improvement in methods of measuring quantities of foodstuffs. The tablespoon was commonly believed to hold half an ounce of fluid, whereas its measure was nearer three-quarters of an ounce. Larger quantities than were intended were therefore administered when this domestic measure was used. He believed strongly in leaving young infants with their mothers, even when the latter were poor and ignorant, rather than in admitting them into a hospital ward where there was always the danger of stray infection. As a routine in out-patient hospital practice he employed mixtures of dried milk and dextrimaltose. These were made up in three strengths and were dispensed at cost price. He had been impressed with the usefulness of lactic acid milk and had also had success with banana pulp feeding in the stationary type of case. He hoped that pediatrics would soon appear among the subjects of the final examination for medical students.

Dr. CATHERINE CHISHOLM (Manchester) strongly supported the opener's contention that pediatrics did not occupy the place it should in the medical curriculum. She urged the use for teaching purposes of the abundant clinical material now to be found in special municipal wards for infants, infants' hospitals, and well equipped Poor Law institutions. Such teaching could not be given in out-patient departments. She was glad that Dr. Cameron had emphasized the real value of proprietary foods as a temporary diet for prescription in cases in which some special need of digestion had to be met. She had found lactic acid milk prepared by culturing the lactic acid bacillus of great value in infants over the age of 3 months. In younger babies she relied in bad cases on breast milk from foster mothers. A supply of such milk should be available in every institution dealing seriously with infantile dystrophies. Her experience of the use of banana pulp had been disappointing. In several cases the immediate effect was good, but after a week or two intolerance developed and the diet had to be changed.

Dr. MARGUERITE LOWENFELD (London) said that a fundamental difficulty in the therapeutics of infant feeding was the lack of agreement as to the criterion to be chosen in arriving at a standard diet, both in respect of composition and quantity. One school aimed at giving a food the composition of which approximated as closely as possible to that of breast milk; another took the actual energy needs of the body as a basis. In the obstetrical department of the hospital she had taken part in a study of the amounts taken by normal babies at each feed during the twenty-four hours, together with a biochemical analysis of the milk. One point of considerable significance in the matter of the fat percentage had emerged. It had long been known that in both human beings and animals the fat content of the milk tended to rise towards the end of a feed. Experimental workers had found, however, that this was not invariable. This investigation had shown that two factors had to be taken into account. The first was the amount of fluid present. The greater the amount of fluid the smaller the percentage of fat. The fluidity of milk was greatest at the beginning of feeding. The second factor was the degree of direct pressure exerted on the areola. This was tested by using

degrees of pressure varying from that obtained by the gentle use of a breast pump to that resulting from vigorous digital expression. The greater the pressure the higher the percentage of fat. With a maximal amount of fluid in the milk and a minimal pressure on the areola, the content of fat might be 8 per cent. below that obtained when the fluid was small in amount and the pressure vigorous. When, however, the pressure was maximal at the outset of a feed and minimal at the end, the percentages of fat could be equalized or even inverted. She was convinced, therefore, that no two infants would get the same percentage of fat from the same mother, even under identical conditions. It might be that the so-called overfed infant to which Dr. Cameron had referred was really the vigorously sucking infant, who obtained not necessarily an excessive quantity of milk, but a milk with a very high percentage of fat.

Dr. HELEN MACKAY (London) emphasized the point that it was not only necessary to have some knowledge of calorie values, but also to be able to instruct the mother as to the conversion of weights of given foodstuffs into the domestic measures available. She instanced the great variations that existed in this respect in different foodstuffs in common use.

MESENTERIC LYMPHADENITIS AND ITS CLINICAL MANIFESTATIONS:

WITH SPECIAL REFERENCE TO ITS DIFFERENTIAL DIAGNOSIS FROM APPENDICITIS.

BY

G. D. F. McFADDEN, M.B., M.Ch., F.R.C.S.Eng.,

ASSISTANT SURGEON TO THE ULSTER HOSPITAL FOR CHILDREN, BELFAST.

MESENTERIC lymphadenitis was well known to physicians in the past under the name of the "strumous abdomen." During life it was guessed at on general symptoms, or from the *post-mortem* table an accurate scientific fact was recorded. It is only since abdominal section has become common that the protean aspects of the condition have been realized. Whether the glands are acutely or subacutely inflamed or have resisted their invaders, symptoms may arise at each step. An acutely inflamed appendix, a stone passing down the ureter, a carcinomatous obstruction, a duodenal or gastric ulcer, can be most accurately mimicked; in fact, there is hardly an abdominal condition for which laparotomy is commonly performed that may not be simulated by diseased mesenteric glands.

That these glands are frequently infected is common knowledge. The tubercle bacillus has been stated to be the causative organism. Still found enlarged mesenteric glands in 59 per cent. of all *post-mortem* examinations in children. Dingwall Fordyce in fifty autopsies could trace tubercle bacilli in 20 per cent. McFadyean and MacConkey found 25 per cent. of clinically non-tuberculous patients to harbour active tubercle bacilli in their mesenteric glands. No child is too young to be infected. De la Alberca reported three cases on which he performed *post-mortem* examinations and found no lesion excepting caseating mesenteric glands. One child was 5 years of age, one 4 weeks, and one had been born only 7 days before. At the Ulster Children's Hospital twenty-five cases of acute appendicitis were treated during 1925 and 1926. So that if one considers the numbers that do not reach hospital these cases must be almost as common as cases of acute appendicitis.

Accurate diagnosis in the case of a patient who is suffering from a pathological condition of the mesenteric glands rests to a great extent on a knowledge of their physiological properties and of their anatomical distributions. The lymph channels follow closely the blood vessels of the same region. The glands are situated in relation to these blood vessels. There are as a rule three sets. The glands affected in mesenteric lymphadenitis are the ileo-caecal, the mesenteric, the inferior mesenteric root gland, the middle glands in the transverse mesocolon, the root glands at the origin of the superior mesenteric arteries, and the lateral sacral glands.

The flow of the lymph through these glands is as a rule direct from one to the proximal one. The lymph may jump from one set of glands to reach a more distant group. This occurs in intestinal infections where the juxta-intestinal group seems to be passed over and the middle mesenteric group infected. It occurs where the area drained has suffered a developmental change in position. The lymph may take a circuitous route to reach its termination if the glands in its direct route are destroyed by accident or disease. It is in this way that a diseased appendix may infect the subpyloric group of glands. Sometimes the lymph flows backwards; this occurs when its onward way is blocked. This has been cited as a frequent cause of phthisis, where the bacilli in the mediastinal glands have their efferent paths blocked and the backwash of lymph carries the bacilli into the lungs. Ravdin reports a case where a mesenteric lymph abscess was opened and drained. The surroundings appeared healthy. Four months later the caecum and ileum were the seat of hypertrophic tubercle. This was in all probability a case of infection of the intestine from a backwash of infected lymph.

Now pathological changes in these glands are a great worry to the surgeon when it comes to a question of diagnosis. In 6,000 to 7,000 cases admitted to various hospitals only 45 were correctly diagnosed. Even the time-honoured aphorism of appendicitis—pain starting at the umbilicus, followed by vomiting, followed by the pain settling down in the right iliac fossa—may attend the beginning of an attack of inflamed mesenteric glands.

At operation three main types of glandular conditions are found: (1) Discrete enlarged inflamed succulent glands. This type is found in children who have exhibited the symptoms of acute appendicitis. (2) A mass of glands grouped around a caseous gland or a small abscess. There is an acute inflammation of the whole mass, and often there is free fluid in the peritoneal cavity. These cases simulate acute appendicitis with abscess formation; occasionally they get intestinal obstruction. (3) The terminal or healed stage of lymphadenitis—a single gland or several calcified glands lying in the mesentery. It is this type that is usually found in adults. The symptoms simulate those of a duodenal ulcer, a renal calculus, or a chronic appendix.

It is noted that children suffering from mesenteric lymphadenitis have a long history of stomach trouble. This history may only be obtained after long and judicious questioning. The history of the complaint may date from babyhood, or from a distant severe illness, such as scarlet fever or measles. Other points to notice are the numbers of cases that suffer periodically from headaches, drowsiness, and loss of appetite for breakfast; these symptoms are probably the sequel of acidosis, a condition common among these patients. Unfortunately the urine of all children was not examined systematically in hospital, and it was after their acute attack—in some cases two years after—that my examination of the urine was made. In my series of cases acetone was present in 63 per cent. During an attack the percentage would certainly be higher. Nausea and vomiting are frequent in their history—some 71 per cent. of cases. I am inclined to think that the acute abdomen due solely to acidosis of the older clinicians does not exist, but that the real condition in these cases is an associated inflammation of mesenteric glands. Distaste for fats is a common symptom. Constipation is not more frequent amongst these cases than amongst the rest of hospital patients.

Pain.

The pain may be severe. A number of patients are awakened out of their sleep by the pain. Carson has drawn attention to the sudden onset and the sudden cessation of the pain. Although this is frequent, it is not so frequent as to be a good diagnostic point. The duration of the pain varies from five minutes to about two hours. It frequently starts at the umbilicus and settles in the right iliac region; it often starts in the right or left iliac region, sometimes in both; it may be epigastric, usually to the left side of the epigastrium; in certain cases,

to be mentioned later, the pain may have the sudden severity of a perforation, or be more chronic and simulate that of a duodenal or gastric ulcer.

When the cases in children that simulate acute appendicitis are considered it is well to remember that the conditions are equally common, at least in the province of Ulster. In England the group most commonly affected is the mediastinal group; in Ulster the glands in the neck and in the abdomen are most commonly affected. In England the human type of bacillus is relatively more common than in this province, where the bovine bacillus is the commoner. The social status of the patient seems to have no bearing; the condition occurs as frequently in the well-to-do as in the poorer classes.

Most surgeons who have written on this subject have stated that it is a localized inflammation of the ileo-caecal group. Undoubtedly it is the group most seriously affected, but thorough examination rarely fails to detect other glands enlarged, though, maybe, to a slight extent. The glands of the neck are nearly always palpable in these cases. Lymphatic glands are more easily palpable in normal children than in adults, but in children with mesenteric lymphadenitis shotty glands larger than in healthy children can usually be found. In quiescent and subacute cases the gland lying at the root of the inferior mesenteric artery can be palpated as frequently as the glands in the right iliac fossa. Enlargement of the lateral sacral gland has often given me the clue to the correct diagnosis in a doubtful case.

The points of special significance in the history are the long period that symptoms have existed, the weak stomach or so-called bilious attacks, periodically recurring pain dating from an original mild attack and becoming more frequent and more severe. (It is this peculiarity in the history that is the reason of the long duration of symptoms before the patient is seen by the surgeon.) The pain may begin at the umbilicus and settle in the right fossa. The attacks of pain are usually preceded by headaches and drowsiness. Vomiting is a frequent symptom before or after the pain, and it does not as a rule affect the pain.

The common age for the patient to be seen by the surgeon is between 7 and 11 years; it is rare to meet a case under 3 years of age.

Period over which Symptoms have existed before seen by the Surgeon.

	Cases.
Since babyhood	4
Under 1 year (average 6 months)	8
Over 1 year and less than 5 years (average 2½ years)	13
No previous history noted	2
Total	27

Age of Patients (Children under 12 Years).
Average age 9 years 8 months.

Below 4 years	1
Between 4 and 7 years	9
Between 7 and 11 years	23
Over 11 years	4
Total	37

Percentage of Figures.

Males	37
Females	63
Laparotomy performed	33
Acetone present	63
Headache	73
Vomiting	71
Lassitude and drowsiness	78

Site of Onset of Pain.

Epigastric	3
Umbilicus	33
Left iliac fossa	25
Right iliac fossa	39

Renal Symptoms.
Two cases had pain on passing water.
One case had haematuria.

As regards physical examination, the patient is often pale with bright red lips; the tongue is moist but often has a whitish fur; acetone may be detected by the odour of the breath. The tongue of an acute appendix case is drier, redder, the papillae are more prominent, and the fur inclines to be brown in colour. A child suffering from mesenteric lymphadenitis has never a tongue of this type. Shotty glands can be felt in the neck, especially in the posterior triangle. The abdomen moves freely with respiration. There may be some muscle spasm in the right lower quadrant of the abdomen, but no true involuntary rigidity except in those cases of Group 2 where there is much periadenitis and the glands are massed together. The muscles in the flank or the lower fibres of the external oblique are never rigid. Rectal examination will reveal nothing, or an enlarged lateral sacral gland may be palpated. Nearly all authors state that there is tenderness at McBurney's point. Now a glance at the lie of the glands in the ileo-caecal angle will convince you that this is an improbability. The maximum point of tenderness in acute appendicitis is most frequently McBurney's point; in an appendix lateral to the caecum, or lying retroperitoneally, tenderness may best be elicited in the flank, above the crest of the ilium. Glandular affections never involve the oblique muscles here. In mesenteric lymphadenitis the site of maximum tenderness is not McBurney's point, but higher up and more medial, as might be expected; the tender area extends upwards in a vertical manner under the right rectus muscle to the transpyloric plane (Fig. 1). This is the position of the inflamed mesenteric glands. I have never found this area of tenderness to betray me, given other suggestive signs. Careful palpation of the left iliac fossa may show local tenderness or an enlarged lymphatic gland. Rectal examination is especially useful. If the finger is inserted to its fullest extent, and, starting in the middle line posteriorly, is swept round the side wall of the pelvis, an enlarged gland, the lateral sacral or the gland of the promontory, can frequently be felt. This lateral sacral gland is felt like a pea. Hyperaesthesia of the skin, simulating the hyperaesthesia of an acute appendix, is sometimes present.

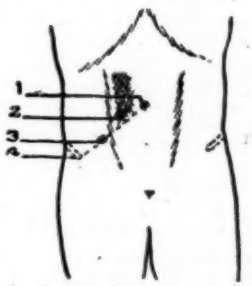

FIG. 1.—Showing the area of tenderness in cases of lymphadenitis of the ileo-caecal angle, as compared with the position of McBurney's point. The area of tenderness may extend over the whole of the shaded area or be limited to the darker area. 1, Umbilicus. 2, Maximum point of tenderness in lymphadenitis of the ileo-caecal angle. 3, McBurney's point. 4, Anterior superior iliac spine.

The temperature varies. It is frequently elevated, depending upon the type of glands found. In Group 2 it is frequently high; it may reach 104° F.

Taking the above points into consideration, the diagnosis of the condition can be made with confidence in practically every case.

Group 2.

Here the glands have become caseous and are the seat of acute inflammation; they are usually massed together, with adherent intestines. There are more general disturbances. It is these cases that give the high temperatures. High temperatures in these cases were also noted by Dingwall Fordyce. The mass may be adherent to the anterior abdominal wall, giving rise to a true localized rigidity. The case has then the objective signs of an appendical abscess. These cases are admittedly difficult to diagnose. If the condition is suspected then the expectant treatment is best. The treatment of the appendical abscess and of the mass of glands will coincide, if it is possible to keep the patient under observation. The position and type of the mass when the acute symptoms abate, with the other clinical signs of lymphadenitis, will decide the question. If the patient worries one it is best to operate. The laparotomy is rarely harmful. A blood count is of no help in the diagnosis. There is usually a lymphocytosis of from 14,000 to 17,000, with 80 per cent. polymorphonuclear leucocytes. These cases of inflamed glands may go on to abscess formation. The abscess may behave like an appendical abscess and burst into the peritoneal cavity, bringing about an abdominal catastrophe.

Group 3.

In this group the symptoms approach those of renal calculus, duodenal or gastric ulcer, or a chronic appendicitis. On looking over the records of the Royal Victoria Hospital for the last year I found some twenty cases which

had calcified mesenteric glands. They had been operated on for duodenal ulcer or chronic appendicitis. We have seen how the pain may come on after food, and its association with nausea or vomiting. If the glands affected are high up in the mesentery the pain is felt in the epigastrium. The skiagram usually shows good peristalsis of the stomach, or some pylorospasm, with the duodenal cup badly filled, and hypermobility of the colon. The picture could be coincident with that of duodenal ulcer, which is the diagnosis usually suggested. Pylorospasm due to lymphatic spread from the ileo-caecal angle has been demonstrated by Braithwaite. Further resemblance to duodenal ulcer is imperfect. The periods of freedom are not so characteristic, though they may last for over a year. Exercise usually gives these patients acute pain. Screening of the stomach and duodenum by the "whitewash method" under the *x* rays ought to show an ulcer. A good picture taken from a well prepared subject ought to show the glands, as they are calcified in most cases. The test meal is within the limits of normal.

The two conditions may coexist. A diagnosis of chronic appendicitis is rarely justified without a history of a previous definite attack. Here again the acute attack may be simulated by a previous attack of acute lymphadenitis. Accurate history taking ought, however, to help the diagnosis. The skiagram ought to reveal a shadow if the calcified glands cannot be palpated.

Owing to the site of tenderness, during a rapid examination, being put down as at McBurney's point these patients are often labelled "reflex dyspepsia from chronic appendicitis." In all cases considered the appendix was removed if it had not been previously dealt with. The notes frequently state that there were adhesions on some fibrosis of the appendix. The removal, however, of this organ only cured 42 per cent. of these cases. A good many of the patients were only traced for some six to twelve months, and as a long period (from one to two years) of relief from symptoms is frequent in cases due to calcified glands, it is doubtful if the percentage of cures is ever as high as 42.

Disease of the urinary tract is often copied in these cases. In my series in children, one patient had pain on micturition, one had haematuria. The pain is often brought on by exercise; it is stabbing in character and may radiate down; it may be felt in the right or left side. Rest eases the pain. Sir J. Thomson-Walker in 1922 had met with 42 cases of calcified mesenteric glands simulating renal disease. Blood was present microscopically in 6 cases. There was profuse intermittent haematuria over eight years in one case; this was cured by the removal of a calcified gland. In 11 cases he operated and removed the glands; this operation cured the pain in these 11 cases.

Undoubtedly the diagnosis from renal disease may be very difficult. The pain, its character and site, its association with haematuria, its provocation by exercise and relief by rest, simulates renal pain. If to these symptoms is added a skiagram showing a shadow in the renal area in line with the ureter, the clinical picture of renal calculus with colic appears complete. In these cases there is no retraction of the testicle with the pain. The pain ceases abruptly. Renal colic usually leaves an aching sensation behind it. The cystoscopic examination is negative. There is rarely ureteric obstruction (only 4 cases have been recorded). The *x*-ray picture is the most valuable evidence if rightly interpreted. Screening and plates taken at different times are usually a necessity. Pyelography and the insertion of an opaque ureteric catheter serve to define the position of a calcified gland.

I have related the common clinical manifestations of the diseased glands; the rarer clinical pictures include the following.

A caseous gland the seat of inflammation will occasionally rupture suddenly into the peritoneal cavity and give rise to the clinical picture of acute perforation of a viscus. In Floderus's series of 100 cases he reported one case of this nature where a young adult athlete when swimming got a perforation. There was no previous history to suggest that such a catastrophe was imminent. Iselin reported 8 cases and Skillman 25 cases of acute perforations. In 2 cases in Skillman's series it was the left gland that perforated.

Occasionally a mass of glands may simulate an abdominal tumour. The most common site for these masses simulating a growth is around the origin of the superior mesenteric artery. It may give rise to a chronic obstruction, and this together with a hard swelling and the wasting common to mesenteric lymphadenitis induces the clinician to decide that it is a case of malignant growth. Without a laparotomy the diagnosis is often difficult, and a microscopic section is sometimes necessary to decide the diagnosis.

Chronic intestinal obstruction is common enough. Four cases of occlusion of the ureter have been reported, and seven cases of obstruction of the common bile duct. Wakely reported a case causing dysphagia and giving rise to a lump in the stomach. Hornuth and Bruning have reported cases of acute ileus. Umbilical fistulae occur, and a cold abscess lying in the retroperitoneal tissues has simulated the psoas abscess of Pott's disease.

Before the satisfactory treatment of these cases can be undertaken it is necessary to unravel the cause of the symptoms and the pathology of the condition. When the glands in the ileo-caecal angle are the main group affected, it at first suggests a diseased focus in the intestine of that drainage area. The appendix is a frequently diseased structure, yet enlarged ileo-caecal glands in cases of acute appendicitis are an unknown occurrence. The appendix when removed in cases of enlarged mesenteric glands is admitted by almost all observers to be within the range of normal. It may show fibrosis or have a few surrounding adhesions—a state common enough in persons who go about free from discomfort. Carson thought that 16 out of his 50 patients had some abnormality of the appendix. Appendicectomy does not cure all these patients, which would be the logical conclusion were it the cause. In a follow-up of 20 cases on whom appendicectomy was done in the Royal Victoria Hospital 12 were traced six to twelve months after operation; of these, 2 felt improved, and one patient who had had the appendix and the gland removed was cured. As has been stated previously, the time was really too short to determine whether a patient was cured, as periods of freedom of from one to two years are common enough.

On examining a series of sections of these glands I was unable, by the microscopic appearance, to discover whether there was more peripheral or cortical destruction. The latter would have indicated a lymphatic, the former a blood infection. The distribution of the diseased glands can best be explained by Calmette's view. He considered that there is first an infection of the local glands; the infecting organism overcomes these glands and then reaches the blood stream. The lower end of the ileum is the site that favours the entrance of organisms. It is in this area that there is most stagnation of contents, and it is here that the reaction of the intestinal contents changes from an acid to an alkaline medium. The glands in the ileo-caecal angle are then the most likely to be picked out. When the infection has passed this barrier the whole lymphatic system becomes quickly infected.

It is difficult to decide definitely if this infection is due to the tubercle bacillus or to another organism. The pathological changes in the glands are those most typical of tuberculous infections—inflammatory reaction, passing on to fibrosis or caseation or calcification or cold abscess. True suppuration is rare; this would not be the case if the infection was due to a pus-forming organism.

Corner suggested that the seeming proneness of the glands in the ileo-caecal region to acute inflammation was due to the change at this point of the reaction of the intestinal contents from acid to alkaline. Tuberculous ulcers of the intestine occur most frequently in the lower part of the ileum. Struthers considered the cases of acute inflammation of the glands to be due to the superimposition of secondary infection on a pre-existing old or healed tuberculous gland. A calf injected with human bacilli will show no effect, except that, some months later, the glands draining the area will be the seat of a chronic fibrosis or calcification. Might not these fibrosed and calcified glands found in the mesentery of man, with their infrequent generalization of tubercle, have a corollary in an infection with the bovine bacillus, which is the type usually found?

The 6 per cent. of cases that ultimately develop signs of general tuberculosis could be accounted for by an infection with the human type of tubercle bacilli.

The common symptoms of acidosis may be explained by the interference with the supply of fats to the liver. The child's metabolism is easily disturbed. Frew showed that the urine of most children suffering from any acute disease contained acetone. The lower ileum and the appendix are great absorbers of fat; appendical concretions are chiefly fat. A calcification and fibrosis of the glands of the ileo-caecal angle must to a great extent interfere with the supply of fat to the liver, and set up acidosis. It seems to me that this acidosis has some relation to the onset of the acute attack of pain in the right iliac region. A dietetic indiscretion, a period of nervous strain, or muscular exertion often starts an attack. Many organisms lie latent till an acid is presented to them. In children first come the symptoms of acidosis, headache, drowsiness, and then pain.

The pain has been attributed to different causes by different observers. Corner thought it was due to the reflex action on the appendix. Carson attributed the pain to the irritation of the mesenteric nerves causing enterospasm. This, he thinks, explains the colicky nature of the pain, and its sudden onset and cessation. He actually saw an intussusception occurring when he was operating on a case of lymphadenitis. Probably Carson's explanation holds good in many cases. It would explain the colicky pain at the umbilicus at the beginning of an attack. The shifting of the pain to the right must be explained by the local inflammatory lesion.

It is easy to understand how a calcified gland in the mesentery with no recent inflammation can, on exercise, cause acute pain. The site of the pain will depend on the part of the mesentery affected. Its irritating presence will also give rise to pylorospasm or enterospasm by reflex nervous action, or its bony hard spicules may irritate a ureter and give rise to renal colic and haematuria. The movements of the intestine after eating will readily cause the calcified gland to act as an irritant, and bring about pain after food, simulating that due to digestive ulcer. The treatment, then, will resolve itself into preventing the condition by a clean milk supply, and in the established cases according to the type.

Group 1.

In the succulent inflamed glands of children operation is not necessary and it is unsatisfactory. Fresh air, sunshine, dietetic treatment, and alkalines are recommended. The diet should consist of large quantities of green vegetables and a liberal amount of protein. Excess of sugars cause fermentations and acid changes in the intestine, and should be forbidden. Highly saturated fats are likely to be incompletely burned and to continue the acid state. I think small quantities of the unsaturated fat in Norwegian cod-liver oil are useful. It is probably absorbed higher up in the intestine than the diseased area. As a medicine small quantities of sodium bicarbonate after meals are useful in preventing the acidosis. When it has occurred large doses of the bicarbonate and glucose are indicated. I have never tried insulin. Fortunately the removal of the appendix does not harm the child if attention is paid to the acidosis.

When a gland abscess is present it may be treated by absolute rest in bed with only glucose and sodium bicarbonate by mouth and by rectum. It will usually subside. If the child appears to be getting worse under this treatment the abscess should be evacuated and wiped out with bipp, with as little disturbance as possible to the surroundings, for the intestines are likely to separate, leaving holes in their lumen. In cases where future obstruction seems to be pretty certain, a side-to-side anastomosis, from above the lesion to below it, will save many a life and hasten convalescence.

In cases of calcified glands I think the evidence is all in favour of their removal. Their close relation to the mesenteric blood vessels should be noted and the blood supply of the adjacent bowel not interfered with. If on account of the close relation of the gland to the blood vessels the surgeon thinks it dangerous to remove the gland completely a partial removal of the gland will in many cases cause a cessation of symptoms.

Violet rays have proved to be of great use in the treatment of the disease in children and in the fibrosed glands of adults. Deep *x*-ray therapy is useful, especially in those cases of massed glands simulating tumours. The dosage should be light, as intensive treatment is apt to cause abscess formation.

Summary.

1. Mesenteric lymphadenitis is of frequent occurrence in children. The most common period for the complaint is between 7 and 11 years of age.
2. Symptoms date back over a long period.
3. The history of frequent attacks of lassitude, drowsiness, headaches, and loss of appetite for weeks past is very common in these patients.
4. Attacks simulating acute appendicitis, duodenal ulcer, and other abdominal diseases are common.
5. Other enlarged glands will be detected.
6. The site of tenderness in inflammation of the ileo-caecal group of glands is not McBurney's point, but a situation higher up and more medial than this point.
7. Operation is unnecessary in the case of Group 1.
8. A calcareous gland causing symptoms should be removed.
9. The cause of the condition in children is probably infection by the bovine tubercle bacillus, with a superimposed condition such as acidosis causing an acute attack.
10. The acute abdomen of children due to acidosis is really caused by an underlying mesenteric lymphadenitis.

My best thanks are due to the surgical staffs of the Ulster Hospital for Children, and the Royal Victoria Hospital, for permission to make use of their case records; to Dr. Vint of the Pathological Department, Queen's University, for the supply of sections of the glands; and to the house-surgeons and out-patient sister at the Ulster Children's Hospital for their help in collecting the cases.

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THE TREATMENT OF CERTAIN MENTAL DISEASES BY RINGER-LOCKE SOLUTION.

BY

JOHN P. STEEL, M.D.ED.,

ST. LUKE'S MENTAL HOSPITAL, MIDDLESBROUGH.

ACTING on the suggestion of Ishida, confirmed by Morowoka (*Journal of Mental Science*, April, 1927), a number of patients in the St. Luke's Mental Hospital, Middlesbrough, have been treated by the subcutaneous injection of massive doses of Ringer-Locke solution. The solution used contained, in a thousand parts of distilled water, sodium chloride 9.0, potassium chloride 0.42, calcium chloride 0.24, sodium bicarbonate 0.1, and glucose 0.1. The patients have been somewhat carefully selected; and the debilitated general paralytic and the toxic case have been considered to be most suitable, but a number of the manic-depressive type have received injections over a considerable period, and latterly we found it advantageous to treat the "debility of senility" in this way.

The aim in all the treatment has been to better the physical condition of the patient, but latterly, in view of the results obtained, we have felt that it is quite reasonable to expect a good deal of mental improvement in certain types of mental conditions. A dose of 1,000 c.cm. has been

injected twice a week; no trouble has been experienced in the introduction of the apparently large amount of fluid, and even the most debilitated patients, male or female, have shown no ill effects.

An ordinary two-way aspiration syringe of 100 c.cm. capacity is used, with a needle of suitable bore. If the bore is large there is considerable leakage from the site of the puncture, and if it is too small the back pressure on the syringe makes the giving of the injection a tedious process both for the patient and the giver. The syringe and needle are sterilized by boiling; where an antiseptic lotion has been used for this purpose one has found difficulty in removing all trace of the antiseptic, and a slight local reaction has occurred. The flank or the back is the most suitable place, and each side is used alternately; the near area of the sciatic nerve should be avoided, and if the temporary swelling is at the level of the iliac spine a little more discomfort is caused to the patient.

The skin of the selected site is well washed with ether soap and then treated with iodine before being frozen with an ethyl chloride spray. It is impossible to give a general statement as to how deep the needle should go. In some cases the needle is passed definitely to the subcutaneous tissues; in others there is less discomfort if the injections are made into the superficial muscles. As a rule the treatment causes transient discomfort and nothing more.

The fluid has been injected at varying temperatures, but one has found that about 105° F. is very suitable, and tends to cause less of a rigor than a temperature lower than that of the body. The fluid should be injected slowly, otherwise the tissues have insufficient time to avail themselves of their natural elasticity, and the patient becomes very restless and complains of a "drawing" pain. When the desired amount has been given the needle should be slowly withdrawn, and the site of the puncture massaged with iodine before being sealed with flexible collodion and covered with a swab. Slight oozing nearly always occurs if the injection has been actually subcutaneous, but this readily stops without interference. If the injection is made into the superficial layers of muscle there is, as a rule, no leakage.

The patient should be carefully propped up in bed by pillows so that the distended area does not take any pressure. Absorption is very rapid, and there is seldom any trace of the fluid after two hours. We have had none of the reported soddenness of the skin even after fifteen or twenty injections have been given.

If it is desirable to give intramuscular medication to the patient this can readily be combined with the Ringer-Locke injection into the superficial muscles. The absorption of, say, karsulphan has, it is thought, been much more rapid, and no after-effect has been observed.

About two to six hours after the injection most patients have some rise in temperature, attended in the majority of instances by a mild rigor. Morowoka states that general paralytics seldom have a rigor, but this has not been borne out here. Practically every patient of this type has a definite elevation of temperature after one or more of the injections; in one patient the temperature rose to above 102° F. twice in the first twelve injections; in another 101.6° F. was the highest figure recorded; whilst a third had a temperature of 103° F. after the second and fourth injections, and no rise above 100° F. subsequently.

The senile type of case, as a rule, shows little reaction of temperature, but in the toxic case there is a definite tendency to rigor. One such patient had a temperature of 103° F. four times in the first fifteen injections; in another the temperature rose to 102° F. after each treatment; whilst a third rose to 104° F. after the first three injections and then settled down to an almost regular normal figure. Usually the temperature subsides within twelve hours and is unaccompanied by any disturbance of the pulse or respiration rate. Sleep is usually much more tranquil, and the patient feels decidedly better.

There seem to be no contraindications. In only one case has the treatment by Ringer-Locke solution been abandoned, and then because a coexistent and spreading attack of herpes made it a matter of difficulty to find a suitable site. Trophic sores in the general paralytic are by no means a contraindication; indeed, we have found that in the very rare cases where such existed they tended to heal more quickly when ordinary treatment was combined with the injection of Ringer-Locke solution. Certainly, the tendency to secondary septic infection is much lessened.

Except for rise of temperature no complications have been observed. Morowoka states that in dementia praecox a rash is sometimes seen; this has not been the experience here with other classes of cases; only once has a slight rash been observed, and that in a patient of plethoric mien.

Results.

Treatment by the Ringer-Locke solution has been carried on here with great regularity and comparatively extensively, but the results obtained with the treatment will not bear comparison with those of either Morowoka or Ishida in point of time, numbers, or actual benefit to the patient. Nevertheless very definite improvement has been observed which may be summarized as follows:

In toxic insanities, after the third or fourth injection it is quite usual to see a clearing of the complexion, and to find a returning power of free natural elimination, a return of tranquil sleep, with an accompanying mental improvement. In debilitated general paralytics, where the stage of acute restlessness has been reached, it has been noticed that after the third or fourth injection the patient becomes much more tranquil.

Daily catheterization was needed in one such case which was admitted in an extremely low condition; enemata and hypnotics were a routine. After the third injection the catheter was used chiefly as a precaution, and after the sixth its use was discontinued altogether; after the seventh injection the daily enema was discontinued, as a dose of liquid paraffin was sufficient to ensure free elimination. Hypnotics are now practically never necessary, as the patient sleeps most of the night.

Another patient, having frequent and heavy seizures which resulted in a partial left-sided paresis, was treated by injection of Ringer-Locke solution. Marked improvement was noticed in both the number and severity of the seizures after the second injection, and the paresis cleared up after the third. No further seizures have been noted. Restlessness is diminished, urine is being passed in full quantities, and a fair measure of sleep is being obtained.

Repeated treatment with Ringer-Locke solution in debility of senility has been followed by really good results; restlessness diminished, elimination increased, there was less danger of the onset of stupor, and appetite tended to revert to the normal.

Conclusions.

Regular and repeated injections of the Ringer-Locke solution have been of definite benefit in cases in which there was a toxic element, and the mental condition seemed to improve more rapidly under this treatment than when "forced" elimination alone was employed. In the debilitated toxic patient the time which must necessarily elapse before the toxic focus can be attacked is materially shortened.

The general paralytic in poor bodily health seems to benefit to a very considerable degree; in fact, the treatment is used here with a view to bringing the patient into a suitable condition for tryparsamide medication. In addition, with the bodily improvement there is an increase in the eliminatory powers. So far but little difference in habits has been observed.

In the "psychological" insanities little improvement has been noticed from the mental side, but even in this difficult class of patient the increased length of sleep and diminution of restlessness is of considerable advantage both to the patient and to the hospital.

I am indebted to the medical superintendent of this hospital, Dr. H. G. Drake-Brockman, for his permission to publish details of the work.

CONGENITAL WORD-BLINDNESS.

BY

ALLISTER M. MACGILLIVRAY, M.B., CH.B., D.O.M.S.,

SURGEON TO THE DUNDEE EYE INSTITUTION.

IN congenital word-blindness the visual memory for letters and words is defective; that is to say, great difficulty is experienced in learning to recognize printed letters and words, so that spelling and reading are exceedingly troublesome, or even impossible. No other defects may be found

in the eyes and eyesight, and no difficulty may be experienced with figures and sums. The condition is said to be uncommon, but it is highly probable that it is frequently overlooked. The following case is evidence of this.

A boy, aged 14 years, was brought to see me by his widowed mother with the object of ascertaining whether his difficulty in learning the letters of the alphabet and his inability to read could be attributed to some visual defect. The family had only recently removed to Dundee from another district of Scotland.

The following history was obtained. He was sent to school at the age of 5 years. At once his teachers noticed that he experienced the greatest difficulty in learning the written letters of the alphabet, and that he was totally unable to recognize written words, however simple. This peculiarity being attributed to backwardness or stupidity he was relegated to, and kept in, the infant classes throughout his school life, even although he showed no difficulty in learning figures and in being able to do simple sums correctly.

On examination his vision was found to be 6/6 in each eye, as ascertained by the figures on Snellen's test types. The refraction was emmetropic. The boy was undersized for his age, but healthy looking, bright, and intelligent. He had had no serious illnesses, and no history of eye troubles could be obtained in any other member of the family. When asked to read printed letters he only did so correctly after several unsuccessful attempts. He was totally unable to read even the simplest words, such as "cat" or "dog," but the pictures of a cat or a dog he at once recognized and named correctly. Figures and easy sums, such as are suitable for infant classes, presented no difficulty. He could write slowly and distinctly, but was unable to do so to dictation. He showed a marked aptitude and keenness for drawing.

The patient was shown at a meeting of the Forfarshire Medical Association in January, 1927.

The chief interest in this case lies in the fact that its true nature was not realized until the boy had reached the age when he was about to leave school and try to earn a living for himself, very heavily handicapped by his inability to read. Had the condition been discovered earlier special tuition in spelling and reading could have been instituted, with the hope of overcoming to a certain extent this congenital disability. Several successful results have been recorded by various authorities.

The condition, as has been said, may very easily be overlooked, the child's inability to learn his letters put down to mental backwardness or sheer stupidity. It is, therefore, highly important that all cases of children who exhibit a marked difficulty in learning their letters should be carefully investigated, and special individual tuition adopted if congenital word-blindness be diagnosed.

ANEURYSM OF THE LEFT INTERNAL CAROTID ARTERY SIMULATING PITUITARY TUMOUR.

BY

S. D. LODGE, F.R.C.S., G. F. WALKER, M.D., M.R.C.P.,

AND

M. J. STEWART, M.B., F.R.C.P.,

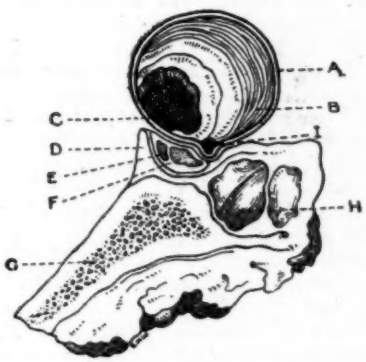
LEEDS.

THE patient, a woman aged 52, consulted Dr. S. T. Rowling on September 27th, 1926, with a history of failure of left vision since January of that year. She noticed, as the first indication of disability, that she was bumping into objects on her left side only. In July, 1926, right vision began to fail, but there were no other symptoms except slight dizziness of one month's duration. She was admitted to the General Infirmary at Leeds on November 1st, 1926, complaining of headache and nausea in addition to the failure of vision. Examination revealed complete amaurosis of the left eye; in the right eye fingers could be counted at two feet distance, but in the temporal field only. The pupils were dilated and sluggish; the fundi were normal, and showed no evidence of optic atrophy. The patient was drowsy, and there was polyuria. It was thought that the hands and feet were slightly enlarged, but this was doubtful, and the general appearances rather suggested hypopituitarism, although without definite signs of myxoedema. It appeared that the condition was one of physiological block rather than of atrophy of the optic nerves, and that decompressive operation might restore some degree of vision. The urine was normal as to constituents, and sugar tolerance and the blood sugar were within physiological limits. The Wassermann reaction was negative. Further neurological investigation yielded negative results. *X*-ray examination showed absorption of the posterior clinoid processes, the sphenoidal air sinuses being clear. A diagnosis of pituitary cyst was made.

At 4 p.m. on November 9th a cerebral catastrophe took place. The patient complained of severe occipital pain, and of flashes of light before the eyes. She vomited copiously, and gradually passed into coma. The pupils became contracted and sluggish and the arms flaccid. The abdominal reflexes were absent; the knee-jerk was absent on the right side, just present on the left. There was a bilateral Babinski response. The coma deepened, and death ensued at 7 p.m. Clinically it was suggested that the catastrophe was the result of haemorrhage into the tumour.

Autopsy.

At *post-mortem* examination, on November 10th, a firm, globular, pedunculated mass was found projecting upwards from the base of the skull into the region of the pituitary fossa. On further investigation this was found to be an aneurysm springing from the left internal carotid artery, the interior being filled partly with pale, laminated thrombus, partly with soft mixed thrombus, and partly with blood clot (see figure). The aneurysm was almost



Mesial (antero-posterior) section through the central portion of the base of the skull, showing the aneurysm situated on the top of the rather flattened out pituitary fossa and hypophysis cerebri. A, Wall of aneurysm; B, pale, firm, laminated thrombus occupying a large part of its interior; C, soft red blood clot; D, posterior clinoid process; E, pars nervosa, and F, pars glandularis, of pituitary body; G, basi-sphenoid and basi-occipital bone; H, sphenoidal sinuses; I, left internal carotid artery.

exactly spherical, and measured 3.5 cm. in diameter. It projected deeply into the base of the brain in the region of the interpeduncular space, the under surfaces of the frontal lobes, and the anterior extremity of the corpus callosum. There was much softening of adjacent brain tissue, and the optic tracts and chiasma were stretched out ribbon-like over the mass, obstructing its forward extension. Recent haemorrhage, presumably from the aneurysm, had taken place into the third ventricle, and had extended from there both upwards into the lateral ventricles, especially the right, and downwards into the fourth. Escaping to the surface, the blood had accumulated in the pia-arachnoid, at the base of the brain, and had even trickled down the spinal canal. The pressure of the aneurysm had also led to much flattening of the sella turcica, with compression of the pituitary gland.

There were no other evidences of syphilis, a scar near the apex of the left lung being regarded as tuberculous in origin. The gall bladder contained a solitary cholesterin gall stone.

Histology.

The wall of the aneurysm is composed of extremely dense fibrous tissue, with much collagen and few and flattened cells, and still bears some resemblance to the arterial wall from which it was derived. Some small foci of early calcification are seen in the inner layers. The contents of the aneurysm consist of typical pale laminated thrombus in the one part and a mixture of blood clot and early thrombus in the other. There is no evidence of organization of thrombus. The pituitary gland, which is slightly compressed, shows a considerable mass of colloid in the

pars intermedia. The pars glandularis is intensely congested; otherwise there is no evidence of pathological change.

The case is of interest as exhibiting the presence of ocular symptoms in the absence of glandular or neighbourhood phenomena. This incongruity fortunately delayed operative measures, and so prevented what might otherwise have proved catastrophic surgical intervention.

FAMILIAL PELLAGRA IN IRELAND.

BY

JAMES T. MacCARTHY, M.B., B.Ch.,

M.O.H., COOLRAIN DISPENSARY DISTRICT.

THE fewness of the cases of pellagra reported from these countries in the past was due probably to the prevalent idea that the disease was confined to subtropical countries. Between 1850 and 1910 no cases appear to have been reported in the British Isles. The discovery of several unrecognized cases by Sambon and others in 1916 in England and Wales raised the probability that others escaped diagnosis. This and the fact that the disease must have become familiar to many civilian medical men serving in the great war combine to account for an increase in the number of cases since recorded. Even so the disease would appear to be of sufficient rarity here to deserve reporting. It is not unlikely that some cases still escape recognition, particularly cases of pellagra *sine* pellagra in countries of little sunshine. In this connexion, too, it may be pointed out that 1926 (in which year these cases were observed) and the previous year were years of exceptional sunshine in Ireland.

It appears probable that the first of the cases here recorded was an acute exacerbation of a chronic affection. Most Italian writers consider that the acute type is never primary, but always an exacerbation of the chronic. Wood and others, however, from their study of cases in the southern States of America, state that at least 50 per cent. are of the acute type. The view that the disease is due to an inability of the patient to use biologically valuable protein would appear to account for these two cases; in them such inability may have been a familial failing. The diet would appear to be a fairly useful one; it certainly is a very usual one in this country.

CASE I.

A woman who had been married fourteen months presented herself on May 27th, 1926. She complained of weakness and loss of energy. She was inclined to be sick in the mornings, and the menses had ceased. She was constipated; she wondered if she were pregnant.

She was of the melancholic type, and her mentality was sluggish; the pupils were very large. The face was greasy and dark, giving the impression that it required washing. There was marked seborrhoea of the nose and mandibular region. There was a rash on the forearms, extending about half-way to the elbows, and on the backs of the hands to the metacarpo-phalangeal joints. On the thumbs it extended to the middle joint. It was much less extensive on the flexor surface of the forearms, and did not come below the wrists. This rash, she said, was of recent origin. The pulse was a little fast. The knee-jerks were lively, and there was a suspicion of ankle clonus. No other physical abnormalities were found.

She was told that it was just possible that she was starting pregnancy, and asked to report later on. Her husband, however, was informed that no evidence of pregnancy could be found, but that her general condition strongly suggested pellagra; this disease was, however, so rare that I hesitated before definitely diagnosing it.

She returned on June 14th. She was then very weak and had had diarrhoea for some days. She had intense vulvitis, moist and red. During the next few days the diarrhoea became severe and was only partially controlled by opium or morphine in one or other combination. There was distressing retching at this time, due probably to intense salivation, as food was not vomited.

On June 20th she presented all the textbook appearances of very acute pellagra. The rash on her arms and face had diminished somewhat and now resembled very closely the coloured plates of pellagra in Dr. Norman Walker's *Introduction to Dermatology*. She was very inert mentally. There was still intense moist circumscribed dermatitis of the vulva. The anal region was red and excoriated, probably from the almost constant passing of liquid motions. There was vague tenderness over the spine; the abdomen was tender all over, but most markedly in the gastric region. The knee-jerk could not be elicited on the left side, and only slightly and with difficulty on the right. She complained of pain in her back and lightning pains in the legs. The pulse was 120 and thready, the temperature 103°. Perhaps the most striking symptom was the intense stomatitis. The tongue was swollen, clean to the point of "beefiness" (Sandwith's bald tongue), ulcerated deeply about its edges, and the buccal mucous membrane was ulcerated and fetid. The fauces could not be seen owing to the swollen tongue and soreness at the angles of the mouth. There were enlarged inguinal glands. Prostration was intense. She died of exhaustion on June 28th.

In support of the view that the disease was an acute exacerbation of a chronic condition, a few notes may be added. Inquiries locally reveal that her neighbours had considered her "not quite right," and had commented on this at the time of her marriage. Her husband informed me that a couple of months after marriage she became "gloomy" and developed "vagaries" and unreasonable jealousies. She got out of her bedroom window one night and went to her mother's home scantily clad and barefoot. She had to be restrained partially at times from doing queer things, and there had been some talk of having her sent to an asylum. Her sister says she remembers her having to go to bed years ago because of "a rash about her neck." Her family history is given in connexion with Case ii.

Her diet was that usual for people of her class in this country: bread-and-butter and an egg in the morning, potatoes, meat, and vegetable (usually cabbage) for dinner, and tea or cocoa at bedtime. This diet hardly suggests a deficiency disease.

CASE II.

A woman, aged 33, presented herself on July 28th, 1926. Her father had died of "heart disease," aged 56, her mother was alive; she had two brothers, of whom one was weak-minded or erratic, and three sisters, of whom one was living; one had died of meningitis, aged 27, and the other was Case i.

She had been married two years and five months, and up to marriage had had good health except for dysmenorrhoea. About eighteen months ago she began to feel weak. She had a miscarriage in October, 1925, and saw a doctor afterwards. She has been weak ever since. The periods have been irregular since, recurring every two months, lasting about seven days, and varying in amount. She has to go to bed at these times. In the forenoon she feels dizzy and has noticed that her mouth fills with water. The bowels move every second day without medicine, and the appetite is fair. She says that her speech is affected and that she cannot continue speaking for long because her mouth feels stiff and tired. When going to sleep she has noticed that her mouth is inclined to fill with water, and she feels as if she could choke. She believes she has been losing weight for the past eighteen months. She presented dermatitis on the backs of the hands, and said that she gets this every summer and that her neck, too, gets very sunburnt. The rash covered the backs of both hands and came forward on the extensor surface of the thumb to the middle joint; it was red, with a good deal of branny desquamation, and some scattered brown pigmented warty or psoriasiform spots on an erythematous surface. There was one such spot on the neck. Her face was seborrhoeic, especially the nose and lower cheeks. The liver was rather easily palpable but not tender; the cervical glands were palpable; the pharynx was a little red. The pulse was 88, and the blood pressure 90/130. There was a suggestion of ankle clonus and both knee-jerks were lively. All other examination gave negative findings.

She was advised to go to bed for a time and afterwards to avoid sunlight and to wear a veil. An iron and arsenic mixture was prescribed and instructions were given as to diet and general hygiene.

In February her sister reported that she was well.

The Registrar-General of the Free State has courteously informed me that two deaths from pellagra were registered in 1922 and 1923. They were of females aged 55 and 60 years.

TRENDELENBURG'S OPERATION FOR REMOVAL OF A PULMONARY EMBOLUS.

BY

NORMAN C. LAKE, M.D., M.S., D.Sc., F.R.C.S.,

SURGEON IN CHARGE OF OUT-PATIENTS, CHARING CROSS HOSPITAL; SURGEON, BOLINGBROKE HOSPITAL.

THE operation for the removal of a pulmonary embolus, first suggested by Trendelenburg, is one that the surgeon can but rarely be called upon to perform. As a consequence the number of recorded cases in which an attempt has been made to remove the clot is very small, and the results almost uniformly disappointing. In the case here described an opportunity was afforded of testing the practicability of this rather dramatic procedure.

On August 5th, 1926, a woman, aged 19, was operated upon at Charing Cross Hosptal for a chronic right-sided pain. The diagnosis had been extremely doubtful and an exploratory laparotomy was performed through a paramedian incision. The only

pathological structure discovered was a cyst, the size of a tangerine orange, of the right ovary. This was removed very simply and without difficulty by ligation of its pedicle; the healthy appendix was also removed in the usual fashion. Convalescence was uneventful except for the presence of a very slight occasional rise of temperature which was attributed to a mild superficial stitch infection. On August 16th, shortly after having left her bed for the first time, she gave a sudden cry of intense pain and collapsed. She was immediately lifted back into bed, where I saw her about a minute later. Her appearance was characteristic of a large pulmonary embolism. She was pulseless, of a peculiar patchy white and purple colour, the expression one of extreme anxiety with eyes widely open and pupils dilated. Dyspnoea was intense, she fought for every breath, but was apparently unconscious. The diagnosis was obvious, but it was very difficult to decide immediately whether recovery was possible. At the end of two minutes, however, she was still alive, which seemed to indicate that only one branch of the pulmonary artery was involved; operative intervention, therefore, was certainly not imperative. Within the course of another two minutes she appeared to improve considerably and regained partial consciousness. Violent spasmodic movements of the whole body now started, connected with the air hunger, dyspnoea still being intense, and at the same time the bowel acted involuntarily. The movements could only be restrained by force and continued for a further two minutes, when suddenly she again collapsed, and, after one or two tremendous but ineffective attempts at inspiration, apparently died. The heart, nevertheless, could still be felt beating feebly at the apex beat. The conclusion was reached that a second clot had been detached which was now blocking the remaining branch of the pulmonary artery so that spontaneous recovery was impossible. After a moment's hesitation it was decided to attempt removal of the clot.

Operation.

Within about a minute, after a very hasty cleansing of the hands and the perfunctory application of iodine to the chest wall, with a scalpel and three pairs of artery clips as the sole immediately available instruments, a semilunar incision was made at the level of the second and third costal cartilages. After turning up the flap of skin and fat the origin of a portion of the pectoralis major muscle was reflected outwards, the second intercostal muscle was detached from the cartilages and the latter then removed by rapidly cutting through them with the knife. This gave a limited exposure through which the margin of the pleura and the base of the pericardium could be seen. All pulsation of the heart had ceased, but the operation was nevertheless continued. In hastily attempting to enlarge this aperture the pleura was torn and the left lung collapsed; better exposure of the pericardium was, however, thereby obtained. The pulmonary artery was still partially hidden by the border of the sternum, and although an attempt was made to hook it forward with the finger and by artery forceps lightly applied, it quickly became obvious that the task of opening it and removing the clot would be almost impossible without further exposure. In the meantime a pair of bone forceps were available and a portion of the sternum corresponding to the length of the exposure and including about half its width was thus removed. The pericardium itself was now opened medially to the left phrenic nerve, which could be seen coursing downwards over its surface, and the artery was palpated in the hope that the clot might be felt, perhaps broken up and driven through into the smaller branches. This failed; the clot could not be detected through the thickness of the vessel wall, and nothing remained save extraction through an incision. Two artery clips were placed in close proximity upon the outer sheath and the index finger of the left hand was passed behind the transverse sinus to hook the pulmonary artery and aorta forwards. It was hoped that this manœuvre would control the bleeding while at the same time rendering access easier.

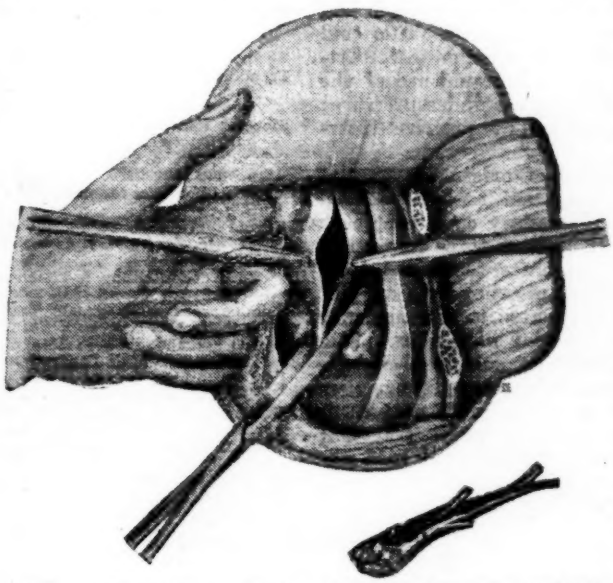
An incision about an inch long was made longitudinally into the vessel on its anterior surface and immediately a large quantity of blood escaped, obscuring the field. By pulling the vessels forwards with the finger the haemorrhage was to a great extent controlled, but at the same time the pulmonary artery was so compressed that it became impossible to insert forceps or palpate the interior in order to determine the position of the clot. This method was therefore abandoned and a pair of soft bowel clamps placed across the roots of the pulmonary artery and aorta. Control of bleeding being now quite reasonable, a finger was inserted into the lumen, where the clot could be easily felt lying in the left branch of the artery with its base riding across the dividing ridge into the right branch, which it partially obstructed. It was extracted with ordinary dissecting forceps and the wound in the vessel rapidly closed with a continuous catgut suture, keeping the edges well everted so that endothelium was in contact with endothelium everywhere. The aperture in the pericardium was also closed.

Direct massage of the heart resulted, after an interval, in a series of irregular and feeble contractions. The force of these beats was slight, but it was impossible to perform efficient artificial respiration to help the circulation owing to the large opening in the chest wall; positive pressure apparatus, too, was not immediately available. At this stage more than 1 c.cm. of 1 in 1,000 adrenaline was injected into the ventricle, with remarkable effect, since the heart commenced to beat more regularly and with increasing force. This continued for a minute or so, and great hopes were entertained of recovery. Gradually, however, the enhancement died away and the beats again became feeble and irregular. Massage was continued, but, although intermittent contractions were obtained for several minutes more, no permanent effect resulted. The chest wall was closed and artificial respiration with further injections of adrenaline tried, without avail.

The clot removed was about 2 inches long, and tapered from the size of the finger at one end to two small branches, about one-eighth of an inch across, at the other. It showed in addition several side branches, and from its shape it was thought probable at the time that it came from the internal iliac vein.

Post-mortem Examination.

The parietal wound was well healed in its whole extent without any signs of infection. The abdominal cavity was clear, and the scar of the appendicectomy cleanly healed without adhesions. The right broad ligament was very slightly thicker than the left, and around the ligature on the ovarian pedicle was a small bead of pus, but there were no indications of surrounding thrombosis. The internal iliac vein was carefully explored throughout its length; no signs of any clot or of roughness of the endothelium associated with the recent detachment of a clot were seen. The left internal iliac, the external and common iliacs, superficial and deep femorals, indeed all the larger veins of the body, were examined, but no signs of thrombosis could be found. The left lung was collapsed but otherwise healthy; in the lower lobe of the right was a rounded area of a bright cherry-red colour, possibly a recent infarction. In the right auricular appendage of the heart a small irregular and apparently *ante-mortem* clot was found.



Sketch showing the manner in which the pulmonary artery and aorta are "hooked" forwards by the finger in the transverse sinus. The shape of the clot with its clearly marked lateral branches is indicated below.

The difficulties confronting the surgeon in this operation are those of circumstance even more than those of technique, while the decision to perform it is not an easy one to make in view of his limited experience as to whether spontaneous recovery can occur, and the knowledge that no permanently successful case has been recorded occasions hesitation born of despair. In his original article Trendelenburg says that two conditions must be fulfilled: (1) Can the diagnosis be made with sufficient accuracy? (2) Is there sufficient time for an operation? He answers both of these questions in the affirmative, and states that there is an average interval of fifteen minutes between the onset of the symptoms and death. He also shows, partly as a result of experimental investigation and partly from actual experience of the operation in two cases, that the pulmonary artery may be compressed for forty-five seconds without fear, and that this may be repeated if necessary after the re-establishment of the circulation for a short period of time.

Experience of the present case would appear to suggest yet another query: Is it possible to resuscitate a patient after removal of the clot when the heart has already ceased to beat? The remarkable effect of the injection of adrenaline directly into the heart, and, even more, the great stimulant effect upon the auricles of forced intermittent aeration of the lungs rendered possible by modern appliances—for example, intratracheal catheter and "lung-motor"—probably make resuscitation feasible even in such desperate cases. In future these two methods should be used from the moment the clot is removed; the time taken by the preliminary stages of the operation makes it possible for the necessary apparatus to be available when required, at least in institutional practice.

When the belated decision to operate has been made, further delay is occasioned by the fact that nothing is ready; instruments usually have to be obtained from a distance, and the surgeon is taken unawares, and so has no stereotyped technique to follow. To add to these difficulties the patient's posture as he lies in bed is by no means an ideal one for this type of operation; the only possible approach through the chest wall cannot be carried out rapidly in the absence of adequate instruments, while the lighting is apt to be very poor.

Although definitely recommended by Trendelenburg, the opening of the pleura was quite inadvertent, since it was thought that the pleural reflection might be brushed well out of the way by gauze dissection. The experience of this case, however, shows that valuable time would thus be lost, and that there need be no hesitation in deliberately opening the pleura. This is especially so since in all cases some variety of positive pressure apparatus should be brought into use before the operation is completed. It must again be emphasized that the efficient and early application of such a method is probably the most important single factor in re-establishing the circulation. In experimental work *in vitro*, with perfused hearts which had been maintained in a quiescent condition in the cold chamber, I found that the most effective stimulus to restarting the beat was the stretching of the musculature of the auricles by the entry of the perfusing fluid under pressure; *in vivo* a similar effect was obtained by positive intermittent aeration of the lungs.

The fact that no adequate source of origin of the clot was found in this case is, in a way, not to be wondered at, since in many cases of fatal pulmonary embolism, both post-operative and spontaneous, it appears to be impossible at the *post-mortem* examination to trace the vessel from which the clot arose. The shape of the clot in this instance showed that it had not originated in the auricular appendix, but probably in the internal iliac vein, along which it had grown without producing sufficient changes in the surrounding endothelium to be visible. It was then carried into the circulation as a whole, and not, as is frequently pictured to be the case, a small fragment detached from it as it grew from the internal into the common iliac vein.

The small bead of pus surrounding the ligature was likely enough aseptic and due to the chemical irritation of the antiseptic in the catgut (picric acid), but this was not put to the proof.

One further point of interest is the fact that the leg had been lightly massaged twice a day after the operation as a prophylactic against femoral thrombosis, according to the suggestion of Morison. This is of doubtful value even in the case of the femoral vein, and can obviously be of no avail in the commoner cases of pelvic thrombosis. Until our knowledge of the etiological factors which determine the onset of thrombosis is much more extensive than it is at present no rational method of prevention can be suggested. It would seem possible that the role of sepsis has been exaggerated in the past, for the incidence of embolism in frankly septic cases is smaller than in those performed with all aseptic precautions. It is at the same time true that in the majority of cases of embolism the temperature chart shows a slight rise for a few days following the operation, but whether this is due to some mild grade infection (perhaps by an ultra-microscopic organism since the ordinary pyogenic organisms are rarely recoverable at *post-mortem* examination) or is a true traumatic pyrexia remains to be proved.

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THE TREATMENT OF SOME OCULAR DISEASES WITH ULTRA-VIOLET LIGHT.

BY

E. R. CHAMBERS, F.R.C.S.ED., OPHTHALMIC SURGEON, AND F. J. A. MAYES, M.R.C.S., L.R.C.P., IN CHARGE OF THE LIGHT DEPARTMENT, BRISTOL ROYAL INFIRMARY.

SINCE the introduction of the ultra-violet light apparatus at the Bristol Royal Infirmary we have endeavoured to arrive at some conclusion as to its effect on some of the ocular diseases subjected to this treatment. Hitherto we have been working on rather "blunderbuss" methods, as very considerable work has yet to be done in sorting out the rays most helpful in medical treatment; the rays range from the near ultra-violet through a big spectral field up to the far ultra-violet, differing considerably in their action, the short being strongly irritative and destructive, whereas the long are more penetrating and stimulative. Still, even with the present methods ultra-violet light plays a very important part in clearing up a number of ocular conditions which, in the past, have been difficult to deal with.

We have made no local applications of light to the eye, but have used the mercury vapour lamp for general radiation of the skin; the first exposure is of three minutes' duration; this is increased by two minutes at each subsequent treatment up to twenty minutes, two exposures a week being given. The distance of the patient from the burner is 36 inches. Care must be taken that the eyes are protected by suitably coloured goggles.

Diseases of the Conjunctiva and Lids.—These have all been cases of children, and of a type which has resisted ordinary treatment. In chronic and long-standing blepharo-conjunctivitis it has been our practice to have tonsils and adenoids dealt with, and an autogenous vaccine prepared from the lids when possible; it is in cases which have continued in spite of this treatment that we have found ultra-violet light valuable. The curative effect of light seems to be due to the improvement in the child's general condition, thus increasing its resistance to infection. The treatment is also very beneficial in cases of chronic and recurring sties.

Phlyctenular disease of the Cornea or Conjunctiva.—Undersized, delicate children, often with enlarged cervical lymphatic glands, respond most readily to treatment. The throat should always be examined for tonsils and adenoids, and these conditions dealt with before the light treatment is begun. Here again astonishing results are often seen in the child's general condition. As a result of light treatment the cure of phlyctens appears to be more permanent than before this method was used, recurrences being much less frequent.

Corneal Ulcers.—The chronic and recurring corneal ulcer so often met with in children, associated with conjunctivitis and blepharitis, does remarkably well under the action of ultra-violet light treatment.

Tuberculosis of the Conjunctiva.—The best result that we have had so far occurred in this disease.

A child, aged 10, was seen with a large tuberculous ulcer, situated in the outer part of the upper lid. Surrounding the ulcer were tuberculous nodules, whilst the remaining conjunctiva was thick and velvety. There was a chain of lymphatic glands in the neck, the upper ones soft and evidently on the point of breaking down. The patient was seen by a surgical colleague, who advised removal of the glands, but before doing this it was proposed to use ultra-violet light. In order to estimate the value of

this particular method no local treatment was applied to the ulcer, the eye merely being kept clean with simple antiseptic lotions. After a month's treatment the glands had become very much smaller, and those that were breaking down were hard. The conjunctival ulcer was cleaner and smaller, whilst the remainder of the conjunctiva showed obvious improvement.

Light treatment was continued, and in four months no trace remained of either the ulcer or the lymphatic involvement. The child's general condition had improved out of all recognition.

This is the only case of tuberculous conjunctivitis that has been subjected to light treatment, but the result is extraordinary when it is remembered how very unsatisfactory treatment has usually been in these cases.

Tuberculous Keratitis.—In a case which was probably tuberculosis of the cornea, occurring in a child aged 10, in which there were present a small central corneal ulcer, with grey infiltrations in the substance of the cornea, iritis, and enlarged cervical glands, the tonsils and adenoids were first dealt with, and subsequently ultra-violet light was used as an adjuvant to local treatment. The progress was slow, but there was a gradual and very marked improvement in the child's general condition, which we had not been able to obtain by any of the usual methods of treatment. The enlarged cervical glands have disappeared, and except for some corneal scarring the eye has cleared up and remains quiet.

Injuries to the Eye.—Ultra-violet light appears to be useful for cases in which the eye remains irritable after an injury, particularly if the cornea has been involved.

In one patient, a young adult who had lost one eye in childhood and received a severe injury in the other by an explosion of a detonator, ultra-violet light was tried after all local treatment had failed to allay a mild iritis and vesicular condition of the cornea. In spite of treatment the patient's general condition had been below par after the accident. He responded splendidly to ultra-violet light, the eye became quiet, and the improvement in his general health marked. The use of light seemed to give this patient just that improvement in his general condition which we had not been able to attain with other methods.

There is no doubt that ultra-violet light is of considerable value in dealing with many ocular conditions seen in children. The progress of the eye depends very largely on the condition of the child's general health, and it is in this direction that we have found ultra-violet light very helpful. Used in suitable doses it will certainly give good results where other methods have failed, but patience is needed by the operator and patient, nothing being gained by trying to speed up recovery by big doses. Nor is it a "cure-all" in diseases of the eye; further work will, no doubt, very soon show us the type of case in which we may or may not expect good results.

GAS GANGRENE FOLLOWING A MOTOR ACCIDENT.

BY

F. W. MARSHALL, M.B., B.S.DURH.,

LICHFIELD, STAFFS.

CASES of gas gangrene are comparatively rarely met with in civilian surgical practice, and the following case is therefore thought worthy of record.

A strong healthy youth, aged 19, employed as a gardener, was admitted to the Lichfield Cottage Hospital on July 23rd, 1927, with a history of having been knocked off his bicycle by a motor car.

On examination there was a transverse laceration, about two inches long, of the left shin in its lower third; it exposed a portion of the tibialis anticus, which was lacerated. There was also a piece of skin, about the size of the palm of the hand, missing from the outer aspect of the left ankle, and the extensor tendons were thus exposed. Both wounds were ingrained with road dirt.

Under a general anaesthetic the wounds were cleansed by means of biniodide solution and a scrubbing brush, and were then swabbed with spirit. The wound edges and all obviously dead tissue were excised and a glove drain was inserted into the shin wound. Antitetanic serum, 1,500 units, was given.

At 10 a.m. on July 25th the temperature was 101° F. and the wounds were very painful, although their outward appearance was much as before. Swabs were taken from the shin wound, for bacteriological examination, and the leg was dressed again. At 7 p.m. on the same day the temperature had risen to 102° F. and the inner side of the leg was swollen and brawny. Slight crepitus, as of surgical emphysema, was noted, just above the internal malleolus. Under general anaesthesia a long incision was made on the inner aspect of the leg, dividing the skin and subcutaneous and deep fascia. Carrel's tubes were inserted, and Dakin's solution was subsequently injected every two hours.

On the morning of July 26th the patient was somewhat better. The wounds, however, looked unhealthy, and the bacteriological report was that the swabs yielded a profuse growth of *B. welchii* and *B. pyocyaneus*. At 7 p.m. his condition was much worse. The temperature was 101° F., he was looking very toxaemic, and both the inner and outer aspects of the leg were swollen, brawny, and acutely tender. There was a peculiar sour odour from the wound.

The patient was therefore anaesthetized, and the wound previously made was extended. The muscle was brick red and very friable, and on squeezing bubbles of gas could be expelled. All infected muscle was therefore excised. A similar knee to ankle incision was made on the outer side of the leg, down to the muscle, a portion of which was excised. The wounds were swabbed with hydrogen peroxide and Carrel's tubes inserted; 30 c.cm. of anti-gas gangrene serum were given intramuscularly.

On the following day he was much better; 60 c.cm. of anti-gas gangrene serum were given.

On July 28th he was still improving, and a final dose of 30 c.cm. of serum was given. The wounds were still very offensive and were covered by greyish-black sloughs. They were being swabbed with hydrogen peroxide twice daily, and Dakin's solution was being injected through the tubes every two hours.

On July 30th he was still doing well, and a second dose of antitetanic serum was given. Bacteriological examinations showed *B. welchii* and *B. pyocyaneus* to be still present.

On August 5th both wounds were comparatively clean and granulating, and a bacteriological examination on August 8th showed a profuse growth of *B. pyocyaneus*, but none of *B. welchii*. The wounds were being swabbed daily with hydrogen peroxide and dressed with gauze soaked in Dakin's solution. The Carrel's tubes were removed, as they were becoming embedded in granulation tissue.

On August 31st both wounds were covered with Thiersch skin grafts obtained from the thighs. They subsequently did very well, and on September 22nd, as they were almost healed, the patient was allowed to get up.

The serum used in this case was supplied by Messrs. Burroughs Wellcome and Co., and I am informed by Dr. R. A. O'Brien of the Wellcome Research Laboratories that "it contained a large amount of *B. welchii* antitoxin and probably a small amount of *B. tetanus* antitoxin, but it was not the polyvalent antitoxin against *B. welchii*, *Vibrion septique*, and *B. oedematiens* which was used during the war."

The literature on this subject previous to the war period is somewhat scanty. Simonds[1] in 1915 collected 175 cases from the literature, 111 of which were classified as follows: Compound fractures 61, lacerated wounds 20, operation wounds 11, gunshot wounds 10, and hypodermic needle punctures 9. It will be seen that in this series compound fractures and lacerated wounds form at least 46 per cent. of the cases.

The most authoritative contribution to the subject covering the period of the war appears to have been made by Weinberg and Seguin,[2] who produced the condition experimentally in the guinea-pig, and definitely established the anaerobic group of organisms—of which *B. welchii*, *B. oedematiens*, and *Vibrion septique* are the chief—as its cause. They advocated serotherapy in the treatment of the condition, but insisted that radical surgical measures must also be taken, and all diseased tissue thoroughly excised.

In civilian practice Christopher[3] reported nine cases from the literature, covering the period 1915-22; they were all traumatic in origin. Baldwin and Gilmour[4] collected 64 cases by twenty-six authors, during the period 1922-27. Of these, 26 were traumatic in origin, 20 complicated obstetrical and gynaecological states, and the remaining 18 belonged to that class in which the causative organism had been derived from the patient's own intestinal canal. These authors also record two personal cases, each due to *B. welchii*, and each treated energetically by anti-gas gangrene serum and by appropriate surgical procedures. In each case the end-result appears to have been excellent.

Brickner and Milch[5] report three fatal cases, from two of which *B. welchii* was isolated, and in the third *B. subtilis* was identified. In each case a tetanus-perfringens (Welch bacillus) serum was given in large doses and radical surgical procedures instituted.

It would seem, then, that our best hope in dealing with this condition depends on three main factors. (1) Early diagnosis is, of course, essential; (2) it is necessary to adopt the operation of épluchage, as developed during the war—that is to say, the excision of all contaminated tissue regardless of the amount of mutilation caused; (3) the condition appears to some extent controllable by the early and energetic use of antitoxic serum. This serum may be

either of the polyvalent variety, or it may be a specific antiserum for the particular causative organism, the latter having first been determined by bacteriological examination.

In conclusion my thanks are due to Dr. J. Menton, director of the Staffordshire County Bacteriological Laboratory, for his kindness in performing the many bacteriological examinations necessary during the course of this case, and for many useful suggestions as to its treatment.

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GAS GANGRENE FOLLOWING A MOTOR ACCIDENT.

BY

EDWARD C. ELLIS, M.B., CH.B., D.P.H.ED.,

COCKERMOUTH.

As the opportunity seldom arises in civil practice for observing gas gangrene, the following case is, I think, worthy of record, occurring as it did after a motor accident, cases of which are now so frequent both in town and country districts.

A youth, aged 18, ran into the rear of a motor car, sustaining a punctured wound of the left leg, produced by the projecting arm of the luggage carrier on the car. The head of the fibula was torn away from its articulation, and the arm of the carrier passed through the interosseous space, tearing the tibialis anterior, the extensor digitorum longus, and the posterior tibial vein, to reappear in the calf of the leg. The tibia was not fractured, but the fibula was cracked just below the head. The posterior tibial artery was intact.

On admission to the cottage hospital the wound was enlarged, thoroughly cleansed with hydrogen peroxide, and bruised skin and tissue removed. The posterior tibial vein was ligatured at its commencement, and the muscle and sheaths repaired. The wound was closed anteriorly, drainage being provided through the wound in the calf of the leg. A prophylactic injection of antitetanic serum (1,500 units) was given locally. The limb was cold, but in a few hours became warm and comfortable. Within eighteen hours of the accident a foul acid smell from the leg was noticed and the toes were cold. Twenty-two hours from the time of the accident the whole limb from just below the knee was cold, discoloured, and swollen. The patient was delirious, with a high temperature and a rapid feeble pulse. After consultation, amputation was decided upon and carried out forthwith just below the knee. On cutting the stitches, the underlying tissue was seen to be discoloured and swollen, and the injured muscles were of a dull brick-red colour, and of putty-like consistence. On cutting the muscles, bubbles of gas were seen to escape; gas also escaped from portions of the vein distal to the ligature. The stump was left open and irrigated by the Carrel-Dakin method. The patient had a relapse about a week after the amputation, accompanied by a rise of temperature and delirium, the cause of which is described below. Eventually he made a good recovery.

I am deeply indebted to Dr. J. T. Selby, Cockermouth, and Mr. Richardson, Keswick, by whose courtesy I am able to publish these notes.

Bacteriological Examination.

A small piece of vein and tissue which showed the presence of gas was sent for examination, and the report stated that two types of Gram-negative bacilli were present in large numbers, the one short and plump, the other much larger and exhibiting, in many cases, terminal or subterminal spore formation. Gram-positive cocci were also present in small numbers, chiefly in chains resembling streptococci. The following facultative organisms were isolated from the vein and tissue: staphylococci, *Streptococcus faecalis*, and *B. coli*. A large Gram-positive, pleomorphic, non-motile bacillus (*B. welchii*) was isolated also. No spore or capsule formation could be demonstrated. It was a strict anaerobe, and actively saccharolytic. No *B. tetani* were recovered, nor any proteolytic organisms of the malignant oedema type.

There is no doubt that the emphysematous condition of the wound was due to the activity of the *B. welchii* in the tissues, but additional interest was given to the case because a slough taken from the wound a week after the accident, when the patient had a relapse with rise of temperature, etc., showed on cultural examination the presence of a motile spore-bearing bacillus, which produced acid and gas in carbohydrates, but failed to coagulate milk, and did not liquefy gelatin. It was therefore not a typical organism of the *B. welchii* group, but resembled the clostridium *B. multifermentans*. It was not pathogenic to guinea-pigs, but produced in them a large amount of oedema.

The question arose as to where the contaminations had arisen. The road surface had been recently tarred and was comparatively clean, but the patient was wearing his farm trousers, part of which had been driven into the wound. Examination of blood-stained and non-blood-stained portions of the trousers showed the presence of *B. welchii*, *B. coli*, *Streptococcus faecalis*, *Staphylococcus aureus*, and *B. megaterium*, no anaerobes other than *B. welchii* were recovered.

This case is of interest from several points of view. One is the exceedingly rapid onset of gangrene and the presence of terminal and subterminal spore-forming organisms, emphasizing the need for prompt prophylactic inoculation of antitetanic serum in all street accidents; although no typical *B. tetani* were isolated, the inoculation may have inhibited their growth. Secondly, we have the presence of two gas-forming bacilli, the typical *B. welchii* being evident in the region of the wound, while *B. multifermentans* was demonstrated in a slough removed a week later.

Furthermore, it points to the advisability of treating all punctured and contused wounds occurring in street accidents and in agricultural districts by open irrigation and dressings, although a somewhat similar case recently treated by primary suture of muscle and sheath resulted in complete functional recovery without sepsis or complications.

My partner, with thirty-three years' experience in an agricultural district, tells me that he has never had a case of gas gangrene, but has had four cases of tetanus. Of these four cases three were punctured wounds: one was an abrasion of the elbow received in a cycle accident; in this case the wound was covered over with adhesive plaster by the patient himself as a first dressing and neglected for a few days; he died. In this district a large number of wounds received by farm labourers and road workers in the course of their work come under my care, and it is only in punctured and contused wounds that any complications have to be feared. Simple incised wounds lend themselves to easy cleansing.

The nidus of infection was here provided by the clothing, and the pabulum for growth by the injured yet viable muscle, assisted by stasis of the circulation and lowering of the temperature of the limb due to shock.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

DIABETES MELLITUS TREATED WITH GLUKHORMENT.

AT the request of the Medical Research Council the clinical effect of a preparation called "glukhorment," introduced by Professor von Noorden in May, 1927, for the treatment of diabetes, has been investigated. It was stated to be obtained by "strong tryptic digestion of fresh pancreas substance," and to contain no synthalin or related guanidine compound. This statement, however, has been shown to be incorrect in the recent article by Drs. Dale and Dudley (JOURNAL, December 3rd, p. 1027).

In two cases of diabetes the effect of glukhorment has been observed on sugar and ketone excretion, on the blood sugar concentration, and on the general clinical condition. Four tablets a day were given after meals. In both cases definite reduction of the glycosuria and the blood sugar was obtained without any appreciable effect on the ketosis, weight, or general clinical condition. Similarity in the action of glukhorment to synthalin was at once noticed, in regard to the slow onset of action, its prolonged action after omission, and the production of toxic symptoms of vomiting and depression.

CASE I.

A man, aged 57, a moderately severe diabetic requiring no insulin, was fed beyond his carbohydrate tolerance until a glycosuria of some 30 grams was produced (diet: carbohydrate 140 grams, protein 75 grams, fat 150 grams). Glukhorment reduced his blood sugar concentration slightly and his sugar excretion from 30 to 15 to 10 grams. No nausea or depression was produced.

CASE II.

A girl, aged 11, with very severe diabetes. The dose of insulin was reduced sufficiently to allow glycosuria of about 25 grams. She was receiving 20 units of insulin twice a day and a diet of carbohydrate 60 grams, protein 60 grams, and fat 100 grams, throughout the test and for ten days previously. She had been in coma five weeks before, and I think her metabolism was not entirely stable and her carbohydrate tolerance still improving slightly at the time of the experiment. Four tablets of glukhorment a day produced vomiting on the third and fourth days, and the sugar excretion fell from 25 to 1 or 2 grams. The number of tablets was reduced to three for two days, after which she again tolerated four without nausea or vomiting; the glycosuria remained low, and the blood sugar was reduced. On omitting

the glukhorment the sugar excretion rose to nearly its previous figure. This was again reduced by further administration of the tablets, but this time she was able to tolerate only three without gastric disturbance. Synthalin, 20 mg., was then substituted for the glukhorment, as this was judged to be the equivalent amount from information received from Dr. Dudley, but it caused severe nausea, headache, and depression, and 10 mg. of synthalin appeared to be about the clinical equivalent of three tablets of glukhorment. When synthalin was omitted the glycosuria and hyperglycaemia returned, though to a less degree than before.

In this case the toxic symptoms of nausea, vomiting, headache, and depression caused by glukhorment and synthalin were precisely similar. The delayed onset on commencing and the continued action on omitting glukhorment (in both about two days) is exactly what happens in cases where synthalin has any effect. Slight proteinuria without casts was produced by glukhorment, but no hepatitis, jaundice, or urobilinuria was observed.

From the above results it might appear (roughly) that three tablets (0.9 gram) of glukhorment contained the equivalent of 10 mg. of synthalin, and that it therefore has about 1 per cent. of the clinical activity of pure synthalin. The chemical analysis of glukhorment, however, suggests a higher percentage of synthalin or a synthalin-like substance, so that the potency of the active principle of glukhorment is probably reduced either by its poor absorption when mixed with dried pancreatic extract or by the antagonistic action of the latter.

In conclusion, the clinical results observed with glukhorment in these two cases of diabetes are precisely the same as may be obtained in many cases with synthalin—namely, moderate reduction of glycosuria and hyperglycaemia and the production of similar toxic symptoms.

R. D. LAWRENCE, M.D., M.R.C.P.,
Biochemical Department, King's College Hospital.

A CASE OF PROTRACTED LABOUR.

THE following case of protracted labour, apparently due to premature ossification of the foetal skull, seems worthy of record.

Mrs. X gives a maternal history as follows: Her first child was born at term, the labour being so quick that she was unable to have attention, and the child died during birth. The second child was born two years later, the confinement being normal; the child is alive and is now 10 years old. No further pregnancy occurred until the one under consideration.

She started to be in labour five days after the expected day, and continued in labour over two days without sending for me. I found the abdomen rather larger than usual; the presentation was a left occipito-anterior, and on vaginal examination I was unable to feel the promontory, although the head was rather higher than usual; the os was dilated to the size of a half-crown piece, and the membranes projected.

I saw her again early the next morning, and found that no progress had been made, and, indeed, even after noon the conditions locally were just as at my first examination, but her pulse rate had advanced to 120, and her tongue had become dry. I then had her removed into hospital and performed a Caesarean section. The child weighed 10 lb. 6 oz., and mother and child are quite well.

On examining the child's head I found that the anterior fontanelle was smaller than usual, and I then arranged for an *x*-ray examination of the head, and also for a control examination of the head of another child three weeks older. The negatives show that the frontal, occipital, and parietal bones give a much more dense shadow in the child in my case two days after birth, than those of the other child three weeks older.

I wonder if such a condition of the foetal head could have been diagnosed before birth; and, if not, how often some general practitioner has been blamed for an unfortunate result which he could not have been expected to anticipate, however scrupulous he might have been in his ante-natal care.

Oldham. FRANK RADCLIFFE, M.D., J.P.

ACUTE PERITONITIS COMBINED WITH LABOUR.

THE following case is worth recording, as illustrating the difficulty of recognizing acute abdominal conditions during and after labour.

A married woman, aged 39, was admitted to the maternity ward at Salisbury Infirmary on September 15th at 1 a.m. Two years earlier she had had a child weighing 7¼ lb. (instrumental delivery), and three years before that she had been in a surgical ward with a very intractable cystitis due to *B. coli*. I saw her at 7.30 a.m., when the temperature was 100.8°, pulse 104, respirations 28. She said she had been feeling seedy for about a week with abdominal pain, which she ascribed to tight-lacing in order to conceal her condition. She had done her ordinary work and had not mentioned her pain to her friends. She complained of abdominal pain, but not more than many women do in labour. She also said her abdomen was tender, but she did not resent palpation. The abdomen gave the impression of rather excessive liquor amnii, and the position of the foetus could not be made out. The os was about the size of a shilling and the head was not engaged. The position of the head could not be diagnosed with certainty. The pains had become weak, and she was given one-sixth of a grain of morphine. She was examined again about three hours later. She still complained of some abdominal pain and tenderness; the pulse and temperature were about the same. The os was then found to be about the size of half a crown, the head was still above the brim, and was in the right occipito-posterior position. The pains were stronger and the general condition quite good. The head was easily flexed and rotated into the right occipito-anterior position, when it engaged at once. An enema was returned unchanged. The membranes ruptured three-quarters of an hour later and a female child, weighing 6 lb., was born normally twenty minutes afterwards. The placenta came naturally five minutes after the child.

That evening the temperature was 99.8°, pulse 136, respirations 40. She was comfortable except for some slight abdominal pain. Next morning the temperature was 98.4°, pulse 112, respirations 40. She had vomited several times in the night and she was slightly distended and tender. No physical signs could be found in the chest.

A turpentine enema was given and a faecal motion obtained, but no flatus. In the evening the temperature was 100.6°, pulse 136, respirations 60. Vomiting had continued and distension was marked, and there was free fluid in the abdomen. A needle was inserted, and turbid fluid was withdrawn which was not blood-stained and had no smell.

My surgical colleague, Dr. Kempe, opened the abdomen and found general peritonitis, but, in spite of careful search, no local lesion to account for it; he expressed the opinion that it was a case of pneumococcal peritonitis. The abdomen was drained and closed.

Her condition went from bad to worse, and she died thirty-six hours later.

The fluid withdrawn from the abdomen gave a copious growth of pneumococcus. The child appeared to be perfectly healthy.

JOHN ARMITAGE, M.R.C.S., L.R.C.P.,
Medical Officer, Maternity Department, Salisbury Infirmary.

TRIGEMINAL NEURALGIA PRECEDING ACUTE GLAUCOMA.

THE following is a brief account of an unexpected sequel to an apparently straightforward case of trigeminal neuralgia or tic-douloureux.

A woman, aged 65, had been subject to neuralgic headaches all her life; they had become more severe and localized during the last two or three months. They occurred at frequent intervals, usually began on waking, and consisted of a dull right-sided headache (hemicrania) with brief stabbing darts of pain in the right temple, forehead, and cheek, radiating over the right side of the scalp. At such times the whole of the affected area was exquisitely tender. Sight was not affected, and the attacks were usually relieved in a few hours by rest and aspirin.

Examination on September 10th, 1926, showed nothing abnormal in the heart, lungs, alimentary or nervous system; the blood pressure was 110/80 mm. Hg; the fundi were normal. A diagnosis of trigeminal neuralgia, for which no exciting cause could be found, was made. The patient was anxious to proceed on a holiday to the Continent, but was dissuaded from this by her medical adviser, who suggested a short period of rest and observation. On September 25th, 1927, she awoke with excruciating pain in the right forehead and cheek, coming on in paroxysms of a few minutes' duration. The parts were tender to touch and the eyes were closed; a little circumcorneal injection was noted on the right side. Vomiting followed, but without relief, the pain being eventually relieved by 1/4 grain of morphine. The patient passed a good night, but the next day the pain was still present, and was localized in the right orbit. The tension of the globe on that side was increased, and there was much circumcorneal injection, but no disturbance of the acuity or field of vision. By evening the diagnosis of acute glaucoma was no longer in doubt, the cornea being steamy, tension ++, and the fundus reflex lost. The condition failed to react to palliative measures, and on September 29th Mr. Hugh Jones of Liverpool performed the operation of trephining and iridectomy on the right eye; recovery was uneventful. During the past year there have been occasional mild headaches, but the severe neuralgic attacks have completely ceased.

The manner in which glaucoma, in the prodromal stages, may mimic other disorders is well known, and this case is of interest in presenting a picture of lifelong tendency to headache, and of trigeminal neuralgia for some months without eye symptoms until the actual onset of acute glaucoma.

My thanks are due to Dr. R. B. Edwards of Mold, from whom the patient was referred, for help in the preparation of these notes.

R. SYDNEY ALLISON, M.D., M.R.C.P.
Ruthin Castle, North Wales.

Reports of Societies.

INCIDENCE OF THE MINOR PSYCHOSES.

AT a meeting of the Section of Psychiatry, held at the Royal Society of Medicine on December 13th, Dr. MILLAIS CULPIN read a paper entitled "A study of the incidence of the minor psychoses—their clinical and industrial importance." The President of the Section, Dr. R. LANGDON-DOWN, was in the chair.

Dr. CULPIN explained that the work, of which this paper was a summary, arose from an inquiry into telegraphists' cramp, which was undertaken by the Industrial Fatigue Research Board. Cramp was assumed to be a fatigue phenomenon until the investigators discovered that the symptoms appeared to point to a psychological rather than a physiological basis. Dr. Culpin was then given the opportunity of interviewing cramp subjects and of comparing them with a control group of persons not so afflicted in order to discover whether cramp was definitely associated with other symptoms of a recognizably psychoneurotic type. This was found generally to be the case, the other symptoms being often of a degree which would lead to the diagnosis of a severe psychoneurotic state. It also became evident that there existed an unexpected prevalence of these symptoms among the control group of presumably healthy people. Students in the school of telegraphy contained 19 per cent. of subjects having symptoms of significant severity. The results of this particular inquiry were published by the Stationery Office under the title of "A study of telegraphists' cramp." The question then presented itself: Was the fact that minor psychoses were associated with cramp attributable to some feature of the work, or was it a phenomenon common to the general population? Thus the investigation was next directed towards ascertaining the proportion of the general population which suffered from the minor psychoses. Associated with this question were two others—Did the distribution of such subjects vary in different occupations? and, What was the probable influence of occupation in determining the incidence of psychoneurotic illness? Sickness records were obtained from various Government departments and from private firms. It became clear that disabilities arising from the minor psychoses played a great part in swelling the totals of time lost through illness. Many employees of various trades and professions were interviewed. The subjects were given a short psychological examination on a more or less formulated plan which elicited the replies necessary to form a diagnosis. Dr. Culpin gave several examples of the types of replies received. Observations were made on day-dreaming at work, the effect of noise, and the reaction of ex-service men towards their war experiences. These phenomena were found to vary according to the temperament of the subject. In addition to the psychological examination, Miss May Smith tested the subjects independently by the McDougall-Schuster dotting machine, the "pursuit meter," and the piezograph, an instrument which registers the pressure exercised in using the Morse key. The results of these tests showed some correlation with those of the examinations. It was found that the dotting test was the best objective procedure to be associated with the results of the psychological examination. An interesting point in connexion with this test was that obsessional subjects produced extremely good dotting records surpassing those of normal people. Examples were given of the responses of subjects suffering from hysteria, hysteria with anxiety, pure anxiety, and obsessional states. The standards of assessment were then discussed by Dr. Culpin. The subjects were put into six groups assessed according to absence of symptoms or to the degree of symptoms. Roughly 50 per cent. of the total number examined were found to be free from symptoms. Sickness rates varied, but they appeared to be independent of the number of minor psychoses that were found in each group. Laundry workers had as large a percentage of high assessments as clerical workers, but illness rates were low. Satisfaction of the workers with their work seemed to be an important factor in illness. It was found that there was no significant statistical difference between the results of the two sexes. Dr. Culpin's general conclusions were as follows: the dotting test kept a check upon the results of psychological examination; there was a high proportion of persons in the general population suffering in varying degrees from the minor psychoses. There was no reason to believe that there was any active selection of particular occupations by psychoneurotic people, except in the case of art students, where the results of investigation confirmed popular belief about the "artistic temperament." The results suggested that the commonly supposed "causes" of psychoneurotic illness were merely factors in exacerbating a previously existing condition. But the fact that such illness was absent in some groups indicated the importance of studying exacerbating factors that must be present in those groups with a high sick rate.

In the course of a brief discussion the PRESIDENT remarked that such an investigation opened up many interesting and important questions from the clinical and industrial standpoints. Sick rates had been shown to be affected, probably accident rates might be affected, and the whole question of the efficiency of the work might depend on whether the employer or employee were suffering from the minor psychoses.

SUPERNUMERARY BREAST.

AT a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on November 11th the President, Professor T. T. O'FARRELL, showed a specimen of supernumerary breast, which had been removed by Mr. Doolin.

A married woman, aged 45, the mother of twelve children, had had a nipple-like swelling in the right groin for twenty years. Two years ago it began to increase in size, but there had never been any discharge or sign of a duct opening on the surface. At the time of operation the pedunculated tumour in the left groin showed subacute inflammatory change. Owing to its nipple-like appearance, and the fact that it was situated in the nipple line, the possibility of a supernumerary breast was considered. The tumour, with a surrounding ring of skin and subcutaneous tissue, was removed under local anaesthesia; it was about the size of a walnut, and appeared to consist of two parts, a deeply situated portion closely resembling a scirrhous carcinoma, and a superficial rather spongy tissue, the interstices of which were filled with a yellowish, caseous-looking material. It consisted chiefly of irregular glandular acini lined by columnar epithelium cells containing many mitoses. In places the acini were round, but in others very tortuous, suggesting adenocarcinoma. Some of the spaces contained concentrically arranged cells suggestive of cell nests. Groups of acini were widely separated by masses of necrotic tissue, which contained fat crystals. There were patches of large clear cells containing fat globules, closely resembling the cells of sebaceous glands; they did not form definite glands, but, nevertheless, appeared to be included in, rather than to be part of, the growth.

Mr. W. DOOLIN said that on removal milky material had exuded, and on pathological examination the growth had proved to be a supernumerary breast. Cell nests had been present, and in the literature he had only found two references to cell nests, which had occurred in cases of ordinary carcinoma of the breast.

Dr. W. D. O'KELLY did not think it possible for a pathologist to say what the origin of the tumour in this case had been. He had seen cases of ordinary carcinoma of the breast in which cell nests had been present, and, in fact, thought it was rather extraordinary that cell nests were not found oftener.

Ophthalmic Cases.

Dr. ALLAN MOONEY showed three specimens of glioma retinae, and a microscopic specimen of cylindroma of the lacrymal gland. Two of the sections exhibited were glioma endophytum, and the third a glioma exophytum with involvement of the optic nerve. The first specimen was particularly interesting because it was the second eye involved; it was in a very early stage, and it originated in the ganglion cell layer of the retina. Parsons had only reported 5 out of 54 cases as being of that variety. The first eye was removed when the patient was 12 months old, and he believed it contained a large growth; the second eye was enucleated four months later. Microscopically the eye presented three chief foci, the largest being the size of half a small pea; besides these there were

many tiny satellites scattered over the surface of the retina, which was not detached. On microscopic examination the largest focus was made up of the usual type of cells found in gliomata. At the most posterior part of the focus were present many of the so-called "rosettes," which were found in much greater numbers in the earlier stages of a glioma. The area of the growth where "rosettes" were present was more vascular than elsewhere, and the blood vessels had very thin walls. The optic nerve was normal, and there had been no recurrence yet. The second specimen was a glioma growing from the inner layers of the retina, which was in place, and the optic nerve was normal. In the case of the glioma exophytum the growth arose from the outer nuclear layer, causing detachment of the retina. It pushed the crystalline lens forward till it was practically lying against the back of the cornea, thereby causing secondary glaucoma. The tumour showed many dead white granules due to calcareous degeneration; this condition was only found in gliomata which had existed for some time. This patient was 2 years old, and two days after the enucleation the child had a severe haemorrhage, presumably due to the optic nerve extension ulcerating into the central artery of the retina. Some weeks later the socket contained a nodule, about half the size of the enucleated eye, which was probably a recurrence of the growth. Since then the child had been undergoing a course of *x*-ray treatment; the whitish nodule was still present in the orbit and about the same size. The child had enjoyed good health since the operation, so that the spread of the growth into the brain had probably been arrested. The other eye was normal. The last specimen he showed was a cylindroma of the lacrymal gland. Tumours originating in this gland were relatively rare, and of the 132 cases which Parsons had collected only one was a cylindroma, though 48 other varieties of lacrymal gland tumour were described. The specimen exhibited was composed of cylinders of hyaline connective tissue between which ran a network of tumour cells; there was a complete row of cells surrounding each cylinder. In places the cells were grouped round a central lumen, which in a few cases contained red blood cells. Broken up blood cells were found extravasated in some parts of the section, and in these places were to be seen masses of amber-coloured pigment, probably of haematogenous origin.

Dr. EUPHAN MAXWELL, referring to the case of cylindroma of the lacrymal gland, said that the patient was a woman aged 40, who had first felt pain in the left eye in 1917. In 1922 the eye had become displaced forwards, and slightly downwards, and a soft palpable tumour was found in the lacrymal cornea. *X*-ray treatment was then given, and there had been no change in the size of the eye for four years. In 1926 there was an increased enlargement of the eye, and more pronounced displacement; the patient complained of pain and double vision in certain directions. Two applications of radium were followed by shrinkage in the size of the growth, and the vision returned to almost normal. In July, 1927, the tumour again began to increase in size, and vision was almost lost; a corneal ulcer and glaucoma were found. It was decided to remove the eye; since this operation the patient had had two treatments of radium and was better, but Dr. Maxwell thought that it was too soon to predict the outcome. These tumours were rare, and Dr. Maxwell believed that there was a certain amount of malignancy present in them. She had only seen four cases in which, on microscopical examination, a tumour of the lacrymal gland had been found.

Insulin and Lactic Acid Metabolism.

Dr. J. J. MCGRATH, in a paper on the influence of insulin on the metabolism of lactic acid, described research in the Stadtischen Krankenanstalten, Mannheim, Germany, under the direction of Dr. E. J. Lesser, and enumerated conclusions from the results obtained. An endeavour was made to discover if insulin had any influence in the Meyerhof process. White mice used in the experiments were killed by sudden total immersion in carbon dioxide snow, which prevented any *post-mortem* variation in the lactic acid content; the lactic acid, sugar, and glycogen in the whole body of the animals were estimated. The first series of seven experiments consisted in the intraperitoneal injection of insulin, and the determination of the amounts of lactic acid, glycogen, and sugar present thirty minutes later. The amount of lactic acid present was not changed by the injection of insulin. In a second series it was shown that the amount of insulin injected caused the blood sugar to fall 50 per cent., and, further, that more than 50 per cent. of the sugar which disappeared from the body after the injection of insulin must have been "tissue" sugar. Also, by reference to Bissinger and Lesser's figures, it was deduced that the burning of the amount of sugar which disappeared would not change the respiratory quotient by an appreciable amount. In the next four series, of four experiments each, racemic lactic acid alone and with insulin was injected intraperitoneally, and it was found that the injection of lactic acid caused no change in the carbohydrate content of the body, though some of the acid had disappeared in thirty minutes. The injection of insulin did not alter the lactic acid values, and the loss of carbohydrate due to the injection of insulin was similar to that in the first series of experiments. The next series of experiments indicated that only 60 per cent. of the lactic acid injected was absorbed from the peritoneal cavity, and of this absorbed amount 50 per cent. had disappeared after thirty minutes had elapsed. In the last series of five experiments dextrorotatory lactic acid was injected, this being the form found in the body; it was thought that it might give results different from those obtained with the racemic form. It was found, however, that although more of the dextrorotatory lactic acid was irrecoverable after a lapse of thirty minutes, this rate of disappearance was not influenced by insulin. It was also shown that the amount of sugar lost was not altered by the injection of lactic acid. In this series the injection of dextrorotatory lactic acid seemed to cause a slight increase in the glycogen present in the body; this increase was not in the liver. It was concluded that neither the lactic acid pre-existent in the body, nor the injected lactic acid, was affected by the injection of insulin.

Professor J. M. O'CONNOR thought that Dr. McGrath had made a definite advance in the study of the physiology of insulin. If the results were treated statistically a further advance might be made.

Dr. A. R. J. DUNCAN thought that perhaps the time allowed for the action of insulin (thirty minutes) was short. In the dog, as well as in the human being, he personally had found that it took at least two hours before any effect began to be demonstrable on the blood sugar. As there was no certainty that insulin was absorbed very rapidly, and as nothing was known about the manner in which insulin acted, it was not possible to state definitely how long the interval would be before it began to act with the lactic acid.

GYNAECOLOGICAL SYMPTOMS DUE TO PANCREATIC CYST.

AT a meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland on December 2nd, Dr. BETHEL SOLOMONS (Master of the Rotunda Hospital) in the chair, Dr. D. J. CANNON read a report of a case of pancreatic cyst which had given rise to gynaecological symptoms. The clinical details were as follows:

The patient had a history of amenorrhoea for three months with profuse vaginal discharge, and a feeling that her abdomen was getting bigger. Her face was bronzed with the sun and so she had a rather healthy look. The enlarged abdomen gave the impression of ascites rather than of a definite tumour, and there was unmistakable evidence of fluid in the abdomen. The uterus was normal in size, shape, and consistency, but an indefinite mass was felt in the pelvis. A profuse discharge was seen flowing from the cervix, but its appearance and the absence of signs of inflammation made it quite certain that the case was one of non-infective leucorrhoea. The lungs were normal. From the physical findings it was surmised that the case was one of tuberculous peritonitis, complicated by tuberculous tubes, though the appearance of the patient was rather against this diagnosis. Sun baths were continued at the end of a fortnight, but the symptoms were unchanged, except that the abdomen became larger; there was no shifting dullness, and the tumour was much better defined. The mass in the pelvis proved to be a loaded sigmoid, and when the abdomen was opened a large cystic tumour of the pancreas, retroperitoneal in position and below the transverse colon, was encountered. It was opened and drained; a tube was inserted and kept

in position by a purse-string suture. The abdomen was closed in layers, and dressings of sterilized vaseline were applied, to prevent blistering of the skin from the irritating discharge; at the end of four weeks the fistula had completely closed, the leucorrhoea had disappeared, and menses had returned.

Dr. Cannon said that these growths were essentially retention cysts, and not proliferating ones like cyst-adenomas of the ovary. Their removal was therefore not necessary in order to effect a radical cure. Should the cyst, however, be so small that it would be impossible to anchor it to the abdominal wall, enucleation would be the ideal treatment. To drain a cyst under these circumstances involved great risk of general peritonitis from the irritating fluid. He concluded that pancreatic cysts were rare tumours which were very difficult to diagnose, and might be easily mistaken for other pathological conditions. When the abdomen was opened they were easily recognized by their anatomical position, which was retroperitoneal and either above or below the transverse colon. If the tumour was large there was no need for enucleation, since conservative treatment would effect a radical cure, but if the tumour was small such treatment might cause general peritonitis. The pathological report of the specimen was that the fluid showed a tendency to alter starch, but no action on egg albumen after two days. The sediment consisted of blood and pus. On cultivation *B. coli* was isolated. These findings indicated infective changes, perhaps, in a cystic condition.

Dr. D. G. MADILL drew attention to the difficulty of relating the presence of the pancreatic cyst with the general gynaecological symptoms of the patient. Dr. F. S. BOURKE thought that in cases of this kind some symptoms of pancreatic obstruction were to be expected, which would appear in the faeces. Dr. BETHEL SOLOMONS dwelt on the difficulty in diagnosis in this case, and mentioned that other non-gynaecological tumours with pelvic symptoms were hypernephroma, displaced kidney in the pelvis, the spleen, and mesenteric tumours.

Dr. CANNON, replying, said he thought that gynaecologists would probably meet with these cases as frequently as surgeons, and should be equally able to treat them. He referred to a somewhat similar case which he had seen; in this there had been shifting dullness. At operation a large retroperitoneal tumour had been found. He thought that this case might have been mistaken for a case of ascites. If a small pancreatic cyst was found it would be difficult to know whether to leave it until it grew larger and then to remove it, or to excise it at the time of operation. He personally would leave it. He thought that these cases were not really so difficult as they appeared from textbooks to be. He had recently removed a mesenteric tumour in a child, aged 2, much more easily than he had expected. It was possible that some cases might be functional. The faeces in his first described case were normal in colour, but had not been microscopically examined. There had been no symptoms of diabetes, and no sugar in the urine.

Ovarian Teratoma.

Professor A. H. DAVIDSON read notes on a case of teratoma, and showed a specimen and slides. He said that solid teratomatous tumours of the ovary were rare and usually malignant, but teratomatous cysts of the ovary, or dermoids, formed about 10 per cent. of ovarian tumours. In these were commonly found ectodermal structures such as skin, hair, teeth, nails, and sebaceous glands; endodermal structures such as thyroid tissue and mucosa of small intestine and air passages were rarely present. These teratomatous cysts were usually innocent, and only became malignant in about 3 per cent. of cases. The interest in his case lay in the fact that it exhibited thyroid tissue alone, and in the last ten years there had been no more than four similar cases reported.

The patient was 39 years old, had been married twenty years, and had had three children, the last pregnancy being ten years before the present date. She complained of pain in the back and right side, headaches, and slight vomiting. Her menses occurred regularly every twenty-eight days; they lasted for nine or ten days and the loss was considerable. There was no leucorrhoea; the appetite was good, and the general health satisfactory. The vulva and vagina were normal, the cervix healthy, but the uterus was enlarged to the size of a large pear by an interstitial myoma. The left ovary was very multicystic. The right was enlarged to the size of a goose egg and was semi-solid in consistency; it was adherent to the peritoneum in the region of the superior and right lateral aspect of the bladder and of the right antero-lateral fossa of the abdomen. There was some difficulty in separating the tumour, and various bleeding points had to be tied. Right salpingectomy, left salpingo-oöphorectomy and total hysterectomy were also performed. Convalescence was uneventful and there had been no sign of any recurrent trouble up to the present time. The pathological report of the case was that there was a solid encapsulated tumour in intimate contact with the ovary. The cut surface presented a somewhat pearly appearance with scattered areas of haemorrhage; it was surrounded by a dense capsule which merged into the ovarian tissue at its upper pole. Microscopically the tumour was composed of thyroid tissue with alveoli of varying size, some of which were lined by low and others by high epithelium; many of them were filled with a colloid material, while in others there was only an indication of the lumen. The capsule was composed of fibrous tissue and contained no ovarian structures. It was an ovarian teratoma and there was no evidence of malignancy in the sections, but cases had been reported of such tumours appearing histologically benign and later giving rise to metastases.

Dr. D. J. CANNON believed that in a typical solid teratoma, if it was malignant, all three embryonic layers were represented. In this specimen only one layer was represented, and therefore he doubted if it was malignant and was inclined to consider it benign. Dr. SOLOMONS said that the teratoids which he had met with were much larger than this specimen. He believed that the best classification of teratoids was into malignant and benign, for either could be present.

Professor DAVIDSON, replying, said that a dermoid was a tumour which developed in an ovarian cyst. It seemed to him quite feasible for a growth of thyroid tissue to develop in the ovary, and grow to such an extent as to make it solid. Solid teratomata were all essentially malignant.

Improved Gynaecological Instruments.

Dr. BETHEL SOLOMONS showed Bonney's myomectomy forceps, which he had improved by putting rubber at the ends of the blades; this, he said, prevented damage to the vessels. He had found two new uses for the instrument: (1) when splitting the uterus in his operation for sterility; (2) it was an efficient clamp to prevent soiling of the vagina in performing a total hysterectomy with carcinoma of the body, or when there was any suspicion of septic material in the uterus.

He showed also a modification of De Lee's stethoscope, which he had found most useful. The part which was applied to the abdomen was movable, making it easy of application to the pregnant abdomen. He used De Lee's stethoscope in conjunction with Rubin's apparatus when working single handed; it was easy with the stethoscope to hear the oxygen passing through the tubes, and to confirm the result given by the manometer.

Professor A. H. DAVIDSON said that Bonney's clamp was a very useful instrument, and the new use for it to prevent soiling of the tissues by clamping off the cervix seemed to him very practicable. Such soiling was always a difficulty in performing a hysterectomy. Dr. D. G. MADILL said that he had not used a Bonney's clamp until about six weeks ago, when he had used it in two or three cases of myomectomy and found it very good. He had never tried it in any other operation, but was sure it would be useful in performing a hysterectomy or any operation. Dr. J. F. CUNNINGHAM said that he had seen Dr. Bonney himself using this instrument, and there had been no haemorrhage at all during the operation. He believed that the instrument was not sufficiently used.

Interstitial Tubal Pregnancy.

Dr. BETHEL SOLOMONS showed a specimen of interstitial tubal pregnancy and gave the following clinical details.

A woman, aged 30, had been married three years and had two children, the last having been born in 1925. There had been no miscarriages. There had been amenorrhoea for a month, and she then noticed a blood-stained discharge from the vagina. Two days later she passed a more solid substance per vaginam, and since then a reddish-brown discharge had persisted. There had been no previous operations or illnesses. She had menstruated every twenty-nine days for four or five days, heavily, without intermenstrual pain or discharge. There was a swelling in the right fornix, close to the uterus, and a diagnosis of broad ligament haematoma was made. The urobilinogen test was negative. The abdomen was opened and a tumour the size of a tangerine orange was found to occupy the right corner of the uterus, external

ostium, and isthmus of tube. Its colour was bluish, with patches of yellow here and there. The uterine vessels were controlled with Bonney's forceps, and the ovarian with ring forceps. The portion of the uterus involved was resected wide of the tumour. The uterine cavity was opened, and the incision closed with two rows of interrupted catgut. The round ligament was brought over the uterine wound, and the abdomen was closed.

The tumour on section presented a cystic cavity about the size of a plum, which was apparently the ovum surrounded by a blood clot about three-eighths of an inch thick. In section through the blood-clot area scattered "shadow villi" were found. This tumour was an interstitial pregnancy which had not ruptured, but had been dead for some time. The patient was discharged in good condition.

Dr. Solomons said it was believed that an interstitial pregnancy never aborted into the uterine cavity, but that the most usual thing to happen was rupture into the abdominal cavity with severe, if not fatal, haemorrhage. It was impossible in most instances to make a definite diagnosis of interstitial pregnancy, although a swelling rather posteriorly in the region of the tube, in close proximity to the uterus, might suggest the diagnosis.

Dr. D. G. MADILL said that he recollected a case in the Rotunda Hospital some years ago which was thought to be an interstitial pregnancy, but which had turned out to be a tubal pregnancy very near the uterus. He thought that this was an excellent case for demonstrating the utility of Bonney's plug. Dr. G. TIERNEY asked what had determined the necessity for operation in this case. Had there been any excessive pain, or only the persistent discharge? Dr. A. H. DAVIDSON referred to a paper by Rubin, in which he described how tubal pregnancy might be explained possibly by the fact that the ovum was being driven along the tube at an early period of the menstrual cycle, and the peristaltic movements of the tube were not sufficient; the ovum was arrested and a tubal pregnancy developed.

Dr. SOLOMONS, in reply, said that the patient had been operated on because of the history of missing a period, and slight haemorrhage.

Adenocarcinoma of the Uterine Body.

Dr. SOLOMONS showed three specimens of adenocarcinoma of the body of the uterus.

The first was in an unmarried woman, aged 43, who complained of pruritus vulvae, slight leucorrhoea, and pruritus mammae. Apart from backache her general health was good. She was a virgo intacta, and examination under anaesthetic revealed a small fibroid uterus, which was removed.

The second patient was aged 55, and sterile. She complained of recurrence of menstruation after amenorrhoea for two years; in addition there was a certain amount of yellow discharge. Both breasts had been removed for malignant disease—one eight years and the other five and a half years ago. She had no other complaints, and had not lost weight. There was a slightly enlarged uterus in good position. A diagnostic curettage revealed adenocarcinoma, and hysterectomy was performed.

The third patient was a single woman, aged 58, who complained of constant haemorrhage for the past two years. Regular menstruation had ceased a year previous to the start of the haemorrhage. Her only former illness was rheumatic fever; she was very anaemic, but had not lost weight. The uterus was small and in good position. A diagnostic curettage disclosed adenocarcinoma, and hysterectomy was performed.

Dr. Solomons commented on the fact that the only complaint of note in the first case was a mucous discharge and pruritus. In the second case, that both breasts had been removed, but he did not believe they had anything to do with the present trouble. He noted that fibromyomata were present in two cases, and that the uterus was small. Nulliparity was nearly always present in these cases, and the age incidence was what was expected. He commented on the necessity for a diagnostic curettage in cases of irregular haemorrhage about the menopause, and had found that the most usual differential diagnosis was between senile endometritis and senile vaginitis. The microscopic report of the three specimens was to the effect that the gland structure was very well marked, and in some places had infiltrated the muscle wall to a considerable extent; in some the epithelial cells appeared normal, but in the main it was degenerated and necrotic. There was much round-celled infiltration. The condition was an adenocarcinoma of high maturity and consequently of low malignancy.

Dr. D. G. MADILL agreed about the value of a diagnostic curettage in these cases of haemorrhage occurring after the menopause. Sometimes the report received on the specimen was that it was non-malignant, but often it was malignant. He himself had had a similar case two or three years ago in which the breasts had been amputated for carcinoma previously. A tumour in the pelvis was found to be very densely adherent and proved to be carcinoma of the ovary. He asked if a Wertheim operation had been contemplated in any of these cases, and mentioned a case which he had seen some months ago with ordinary multiple fibroids, in which he had performed a supravaginal hysterectomy, and had received a report of adenocarcinoma. Referring to the after-treatment of these cases, he asked if Dr. Solomons gave morphine, and if there was subsequent constipation.

Dr. DAVIDSON thought the important thing in adenocarcinoma of the body of the uterus was the diagnosis; these cases frequently did not begin to show symptoms till the condition was advanced. An important fact to remember when examining these patients was that the condition usually occurred after the menopause. At this time the uterus was very atrophic, and it was easy to be led astray by finding a small uterus; it should be borne in mind that cancer of the uterus might be present in cases where the tumour was very small. In these cases it was necessary to use the curette with care, since sometimes it entered the wall of the uterus and perforation occurred, with disastrous results. He drew attention to the necessity for examining the groins in these cases for the possible presence of enlarged carcinomatous glands.

Dr. J. F. CUNNINGHAM asked if in the case described by Dr. Solomons there had been any haemorrhage, and, if not, why operation was performed. The patient apparently had had a small myoma of the uterus, but he wondered if there had been any other reason for deciding on an operation.

Dr. SOLOMONS, in reply, said he considered that total hysterectomy and not Wertheim's operation should be performed for cancer of the body of the uterus. He had never found the inguinal glands enlarged. He operated on the first case because he believed that the disease in the uterus was producing the mucous discharge which caused the pruritus. He was a strong believer in the value of morphine after operations.

JAMES MACKENZIE INSTITUTE.

ON November 29th, at the James Mackenzie Institute for Clinical Research, St. Andrews, Dr. EDMUND SPRIGGS, in a paper on the early symptoms of cancer of the stomach, said that study of a series of patients showed that the onset of the disease was appreciable in most cases. In two-thirds of them the symptoms dated back more than nine months, on the average an interval of a year or more having elapsed before a full investigation was made. Analysis of the symptoms in order of frequency, and of the order in which they arose, showed that the most important early symptoms were fullness, discomfort, or pain, not severe or continuous, but recurring persistently, and arising in a middle-aged or elderly person. The next symptoms in order of frequency and importance were lack of appetite, dislike of food, or nausea, with resulting loss of weight. Haemorrhage might be a first symptom. The pain or discomfort was often relieved by food in cancer of the pylorus and of the body of the stomach. Among the cardinal symptoms of cancer wasting and tumour were late results, and pain was so variable that no security could be assumed from its absence. Anaemia was usual, though in exceptional cases the blood might be normal up to a short time before death. When cancer arose in the subject of ulcer or other forms of dyspepsia there was often a recognizable change in the symptoms. The earliest objective sign of cancer was probably local arrest of the wave in the stomach as shown by x rays. This was demonstrated by the superposition of serial films taken at such an angle that the lesion was in profile. The sign was common to cancer, ulcer, and fixation by adhesions. A filling defect, or much induration at the edge of an ulcer, as shown by bending over of the shadow, suggested cancer. The tests for achylia and occult blood were of great value. If there was radiological and clinical suspicion of cancer the risk of operation to make sure was much smaller than the risk of watching the case. It was wrong to treat indigestion for

any length of time in a middle-aged person without taking steps to exclude cancer. Resection of the pylorus or the body of the stomach, if undertaken at an early stage, could be performed successfully. In conclusion, Dr. Spriggs declared that the fight against cancer was a fight for early diagnosis. If the delay between the onset of symptoms and investigation could be avoided, life could be saved in a great proportion of cases. Further progress depended at present upon the profession and the public becoming alive to the fact that earlier diagnosis could and should be made.

Reviews.

EMERGENCIES IN GENERAL PRACTICE.

IT is a truism to say that as each year passes the peaceful citizen becomes more exposed to risk of life and limb in going about his ordinary affairs. Quite apart from the enormous increase of mechanically propelled traffic, even such an apparently innocent amusement as "listening in" may be fraught with the gravest danger, as one or two recent incidents have testified. It is incumbent upon every member of the medical profession to arm himself that he may deal promptly and efficiently with the many and various emergencies which sooner or later he may encounter either in the routine of his duties or as a casual passer-by. For these reasons the appearance of such a book as *Emergencies of a General Practice*,[1] by two American practitioners, the late Dr. NATHAN CLARK MORSE and Dr. AMOS COLCORD, is cordially welcome. Every conceivable emergency seems to be described by these authors, from electrocution to tubal rupture, from poisoning by ivy to fractures of the long bones. The advice given is dogmatic and practical, from the seasoned experience of men who have done the things they describe and not simply read about them. Of necessity in a book of this kind, the wider considerations can only briefly be touched upon, but useful references to original papers are given so that those interested can probe more deeply.

Where necessary the authors do not hesitate to indicate when in their view a method of treatment is beyond the skill of the ordinary general practitioner, but while they urge the supreme importance of the doctor recognizing his limitations at all times, they never fail to encourage him to increase his sphere of usefulness by "learning to do many things better." They say in the preface: "One cannot but feel that the general practitioner is sending too much work to the specialist, that the good old family doctor is passing." As in the United States, so it is, we fear, in the United Kingdom. The authors are very outspoken as to the harm done in workshops and elsewhere by the haphazard daubing on of tincture of iodine to cuts and injuries by unskilled—and unwashed—hands and then hoping for the best.

The subject of shock, from both the theoretical and practical aspects, is very well epitomized. In describing the treatment of shock we note that no mention is made of pituitary extract—a useful aid, if not of absolutely supreme importance. A flat contradiction has been allowed to creep in, in the discussion of the treatment of acute infections of the knee-joint. On one page active movements are extolled, and the statement is made: "Recovery was quicker and the function of the joint much better than under the old immobilization treatment. This method . . . is in use by most surgeons"; on turning the page we are faced with the remark that "immobilization of the joint is of the greatest importance." The value of insulin in diabetic coma and the method of using it deserve more than the casual reference made by the authors. One other slip occurs in describing the use of midwifery forceps, when we read: "simply placing the patient in the *English* position on her *right* side." These slight blemishes do but confirm our opinion of the book's very high standard of general excellence. It is not only useful, but inspiring, and certainly one which should be read by every doctor who is not a pure specialist or a fashionable signpost thereto. The illustrations, on the whole, are good, but more have been employed to depict the use of zinc strapping instead of bandages than seems quite necessary.

[1] *Emergencies of a General Practice.* By the late Nathan Clark Morse, A.B., M.D., F.A.C.S., and Amos Watson Colcord, M.D. Second edition. London: H. Kimpton. 1927. (6 × 9½; pp. 541; 311 figures. 42s. net.)

RHEUMATISM AND GOUT.

IN the preface to his volume entitled *Aspects of Rheumatism and Gout, their Pathogeny, Prevention, and Control*,[2] Dr. L. JONES LLEWELLYN apologizes for some overlapping, as the essays and addresses it contains were composed at various dates. In the opening chapter the history of the conception of diathesis is traced, and its recent revival approved; this prepares the way for the argument that the rheumatic diathesis is "an inborn predisposition to endocrine-autonomic imbalance" and particularly connected with thyroid inadequacy; this opinion he supports by various considerations. The association of hyperthyroidism and Graves's disease with acute rheumatism is fully discussed; while believing that rheumatic fever probably develops on a hypothyroid basis, he assumes that there is a compensatory swelling of the thyroid, so that Graves's disease develops as an extension of acute rheumatism. Much consideration is given to the relation of goitre with the rheumatic diathesis, and thyroid instability or inadequacy is held to be important both in the articular and non-articular forms of chronic rheumatism. The relation of oral sepsis to arthritis is also considered in detail.

The author's work on gout was reviewed in these columns (1921, i, 271), and in an address given a year later he returned to his conceptions of its etiological relations to focal infection, food idiosyncrasies, and protein hypersensitiveness. He suggests that gouty subjects are hypersensitive, not to alcohol, but to some protein contained in alcoholic beverages, such as hordein in beer, or yeast or other proteins in wines, red wines being often treated with white of egg. For this view that gout is an allergic disease support is sought in the writings of the French school of Chauffard and Widal, the latter having shown by skin tests the peculiarly selective hypersensitiveness of the gouty to certain wines.

[2] *Aspects of Rheumatism and Gout, their Pathogeny, Prevention, and Control.* By Llewellyn Jones Llewellyn, M.B.Lond. London: W. Heinemann (Medical Books), Ltd. 1927. (Demy 8vo, pp. xiii + 295. 10s. net.)

AN AMERICAN TEXTBOOK OF GYNAECOLOGY.

THE well known treatise on the *Diseases of Women*[3] by HARRY STURGEON CROSSEN, M.D., F.A.C.S., is a characteristic American production. It is bulky, very weighty, profusely illustrated, and encyclopaedic in its scope. The preparation of the new edition has not called for material alteration, save in the direction of bringing its matter generally up to date. The investigation of cases of sterility by *x* rays after the injection of opaque matter into the uterine cavity and tubal lumen for the diagnosis of tubal occlusions is one subject that has been fully revised.

The general lay-out of its matter is as it was in the previous editions, though it cannot be described as scientific or logical. The arrangement is more on an anatomical than a pathological basis, but does not follow either. To give an idea of the author's scheme some of the chapter headings may be noted. The book opens with three chapters in which gynaecological examination, diagnosis, and treatment are discussed; next comes a chapter on diseases of the vulva and vagina, in which infections, growths, and regressive changes are dealt with. This suggests an arrangement on the old anatomical lines, beginning from the external organs and working up to the ovary and peritoneal cavity. The next chapter, however, is one on relaxation and fistulae; then follow four on the uterus, headed respectively "inflammatory and nutritive disease," "displacement," and "growths, innocent" and "malignant." There is a chapter on

[3] *Diseases of Women.* By Harry Sturgeon Crossen, M.D., F.A.C.S. Sixth edition, revised and enlarged. London: H. Kimpton. 1927. (Sup. roy. 8vo, pp. xxxii + 1160; 933 figures. 50s. net.)

pelvic inflammation in which the internal infective processes generally are treated, but such specific infections as tubercle are relegated to odd chapters. There is also a chapter on malformations, in which vulval, vaginal, and uterine developmental errors are described. This outline will suffice to indicate the total lack of orderly arrangement of its matter which is the chief fault in what is otherwise a sound presentation of gynaecological practice.

The clinical teaching is judicial and strikes a happy mean between the excesses of the extreme surgical enthusiast and the medical and minor procedures that were once supposed to characterize gynaecological practice. The use and place of the pessary is well discussed, and the sections on the internal secretory glands and their relation to gynaecology give a well balanced view of our present knowledge. There are a few pages on the neurological side of gynaecological practice, but this aspect is scarcely considered in some sections of the book where it might have been expected to be discussed. For instance, in conditions such as vaginismus and dyspareunia, in which the psychoneurotic element is clearly predominant, no reference is made to the psychological factor.

The illustrations are excellent, particularly those of pathological specimens and histological slides; this sixth edition is sure to meet with as hearty a welcome as its predecessors.

VICIOUS CIRCLES.

As most of our readers are aware, Dr. Jamieson B. Hurry, formerly of Reading, has written several books on vicious circles in disease. Now we have from Dr. LORENZO PEZZOTTI an Italian criticism of the conception of vicious circles in pathology.[4] Dr. Hurry describes a large number of circles and discusses how they may be broken; the Italian author seems to think that the method has been rather overdone, inasmuch as an impression has been created that there is such a thing as circular pathology, although Dr. Hurry warns his readers against any such one-sided view. One of the instances cited is stone in the bladder: the stone gives rise to cystitis, the cystitis causes further increase in the size of the stone, this intensifies the existing cystitis, and so on. The inference to be drawn is that a vicious circle has been established which needs breaking, and that this is best effected by removal of the stone. This seems an unnecessarily roundabout way of arriving at the fact that the patient wants to get rid of his stone. There are cases, however, in which the notion of a vicious circle is useful, and Dr. Pezzotti admits this; he contends, on the other hand, that, generally speaking, it is unscientific and undesirable to regard disease from the point of view of vicious circles.

Dr. Pezzotti maintains that the circles are in fact not vicious, but depend on normal physiological arrangements; that the vicious element is merely a defect in one of the organs concerned in the circle or altogether outside it, and that in concentrating attention on the circle important factors are apt to be overlooked. Thus, to take another example of Hurry's, that of nephritis: A toxaemia damages the renal epithelium, this causes an increase in the toxaemia, which in its turn further damages the renal epithelium, and so on. The danger here is to lose sight of the fact that the circle depends on an outside factor, namely, the cause of the initial toxaemia; the whole disease depends on this factor, and the vicious circle can be interrupted only by its removal. To leave it out of account would, Dr. Pezzotti considers, be analogous to regarding the swing of a pendulum to the right as the cause of its swing to the left, and vice versa, without reference to the spring or weights. It must be admitted, however, that where the primary cause of a disease is inaccessible it may still be possible to make some beneficial modification, short of complete interruption, in a vicious circle; palliative treatment is often of this nature, and the notion of the vicious circle serves a useful purpose in such cases.

[4] *Commenti e Critiche al Concetto dei "Circoli Viziosi" in Patologia.* By Dott. Lorenzo Pezzotti. Bologna: L. Cappelli. 1926. (Sup. roy. 8vo, pp. 69. L.10.)

TREATMENT OF CANCER BY INJECTIONS OF METALLIC SALTS.

LAST May Dr. J. LERICHE of Joigny read a paper to the French Society of Therapeutics on the medical treatment of carcinoma; this has now been published in a pamphlet,[5] together with another article by him on the association of the endocrine glands with cancer, in which he suggests that the "specific factor" postulated by Gye and Barnard has its origin in endocrine disturbance. Leriche holds that the neoplasm and its metastases can be attacked by the injection of colloid metal salts, but that it is also necessary to correct certain mineral and other deficiencies in the body. For the first purpose he employs a mixture of the colloid preparations of copper, selenium, palladium, magnesium, and arsenic sulphide with mesothorium bromide and saccharose. He states that intramuscular injections of this medley are not painful, and are always well tolerated. He administered concurrently intravenous injections of a combination of the citrates of sodium, magnesium, and manganese, magnesium chloride, and ferric-potassium tartrate. If benefit does not follow speedily he gives intravenous or intramuscular injections of a protein suspension of lead. With a view to dealing with the alleged mineral deficiency in the tissues, Leriche also administers three preparations: the first containing crystallized haemoglobin, manganese sulphate, and ferrous oxalate; the second, colloidal sulphur; and the third, a mixture of magnesium carbonate, yeast, lactose, and calcium carbonate. If these are not well tolerated an aqueous solution of the double peptonate of iron and manganese is substituted. Organic deficiencies are treated by the administration of glandular extracts, the mixture containing the fresh pituitary and thyroid glands of sheep, ox suprarenal, and, according to the sex, either ram's testis or heifer's ovary; this polyglandular medication is varied according to the seat of the cancer. In mammary carcinoma, for instance, it should include extracts of thyroid, pancreas, and mammary gland, while in elderly patients genital gland extracts should constitute the greater part of the medication. Clinical details of six patients so treated are given, with illustrative radiograms. His cases were a large pyloric neoplasm, an inoperable tumour of the ischio-pelvic colon, one inoperable gastric neoplasm, and another of the descending colon, a myosarcoma of the right thigh, and a similarly situated osteosarcoma. These patients had received other treatment previously (surgical, x-ray, or radium) without definite benefit. In each case apparent cure without recurrence is stated to have followed the injection treatment. It is to be noted that the diagnosis was based only on the clinical symptoms and radiograms, no confirmatory histological examination being made. In this awe-inspiring galaxy of medicaments there is a reminiscence of the elaborate prescriptions of a bygone age. It is easy to understand that a certain amount of scepticism has resulted, but it is apparent that the age of "brighter therapeutics" is still with us.

IDIOSYNCRASY AND CONSTITUTION.

SIR HUMPHRY ROLLESTON has written a book on *Idiosyncrasies*[6] which, small as it is, seems to touch upon every aspect of that perplexing subject. It is a contribution to a series of little books called "Psyche Miniatures," because published in connexion with *Psyche*, a quarterly journal on psychology. The series is edited by Mr. C. K. Ogden, who seems to possess a broad-minded mental perspective and so chooses his writers wisely. In the course of his essay Sir Humphry Rolleston has to deal with the subjects of diathesis and the constitutional factor in disease, recently discussed with so much acumen in our columns by Sir Archibald Garrod and Dr. A. F. Hurst. It is difficult to define "idiosyncrasy." Sir Humphry Rolleston speaks of it as "an abnormal reaction in an otherwise normal

[5] *Glandes Endocrines et les Cancers; Exposé de la Thérapeutique Médicale Anticancéreuse.* Par Joseph Leriche. Paris: N. Maloine. 1927. (Roy. 8vo, pp. 51; 6 plates.)

[6] Psyche Miniatures, Medical Series. No. 8: *Idiosyncrasies.* By Sir Humphry Rolleston, Bt., K.C.B., F.R.C.P. (Pp. 119.) No. 9: *The Constitutional Factor in Disease.* By Arthur F. Hurst, M.D., F.R.C.P. (Pp. 93.) London: Kegan Paul, Trench, Trubner and Co. 1927. (2s. 6d. each.)

person, which may be either on the one hand greatly exaggerated, or on the other hand greatly diminished; more briefly it may be described as an unusual physiological personal equation." Idiosyncrasy may be held to embrace both diathesis and constitution, but the author of this informing book would limit diathesis to a condition favouring the onset of disease, whereas idiosyncrasy is an abnormal reaction not necessarily disposing to disease. Within the definition of "constitution" he would bring the inborn errors of metabolism, so named by Sir Archibald Garrod; we are inclined to think that he is right, and even disposed to suggest that he has not quite attached sufficient importance to these inborn conditions.

One section of the book deals with asthma; it contains a comprehensive survey beginning with Sir John Floyer (1649-1734), and coming down to the latest views of Hurst and Storm van Leeuwen. The same subject is dealt with in HURST'S own contribution to the series entitled *The Constitutional Factor in Disease*, which is a revision of the address published in our columns in May, 1927. He, it may be remembered, lays stress on the influence of heredity, and it is perhaps on this account that he defines asthma as "a condition in which that part of the vagal nucleus which controls the motor and secretory activity of the bronchi is abnormally sensitive to chemical, reflex, and psychical stimuli."

NOTES ON BOOKS.

Mental Handicaps in Art,[7] by Dr. T. B. HYSLOP, the author also of *Mental Handicaps in Golf*, which was reviewed in our issue of June 4th, 1927 (p. 1025), is introduced by a foreword from Professor ARTHUR THOMSON of Oxford, who, with the authority of a professor also at the Royal Academy of Arts, sternly rebukes the modern fashions of perverted art and the representation of the unfit. Dr. Hyslop also expresses anxiety about a tendency to degeneracy in present-day art, remarking that one of the great mental handicaps in some schools of art is a failure to perceive the illogical nature of their tenets, and that since the war vitiation of taste in art has proceeded apace, cumulative traces of primitives, classicists, romanticists, naturalists, impressionists, post-impressionists, and decadents having contributed respectively either to its growth or decay. The five chapters of this attractive little volume deal with the aims and objects of art, industry and art, the artistic faculty, disease in art, and the influences of toxins on mind and body. Dr. Hyslop, who by his artistic abilities is specially fitted to write on these subjects, points out that while normal functional powers are essential for a healthy artistic faculty, abnormality is not necessarily productive of bodily disease or bad art, and may lead to something out of the beaten track or a work of genius. The artistic efforts of mental patients are not always degenerate—in fact, the artistic merit of a paranoiac may be great. But he concludes by insisting on the importance of mental and physical health, so that *mens sana in corpore sano* should be the motto of every artist.

Common Procedures in the Practice of Pediatrics,[8] by Dr. ALAN BROWN and Dr. F. F. TISDALL, includes a curious assortment of subjects, and its contents are indicated by the subtitle —"a detailed description of diagnostic, therapeutic, and dietetic methods employed at the Hospital for Sick Children, Toronto." There is a short account of physical examination, and two chapters on the diet and general control of infants and young children, which, although not complete, deal with the more important matters both in their general principles and in their practical details; the remaining chapters are devoted to the exposition of a long series of diagnostic and therapeutic procedures, both clinical and laboratory. A useful section on the diagnosis of certain conditions that frequently give difficulty is interpolated. The authors themselves make it clear that the book is not a complete account of the comprehensive subject of pediatrics. But it is a very useful book, for it is written from experience, and it deals with a miscellaneous group of subjects which are either omitted, or dealt with inadequately, in the ordinary textbooks.

[7] *Mental Handicaps in Art.* By Theo. B. Hyslop, M.D., C.M., etc. With a foreword by Arthur Thomson, M.B., F.R.C.S., LL.D., D.C.L. Mental Handicap Series. London: Baillière, Tindall and Cox. 1927. (Fcap. 8vo, pp. xxxiii + 98. 3s. 6d. net.)

[8] *Common Procedures in the Practice of Pediatrics.* By Alan Brown, M.B.Tor., and Frederick F. Tisdall, M.D.Tor., M.R.C.S.Eng., L.R.C.P.Lond. Toronto: McClelland and Stewart, Ltd. 1927. (Med. 8vo, pp. x + 260. 4 dollars.)

The third quarterly number of this year's *Annals of Medical History*[9] begins with an oration delivered at the College of Physicians of Philadelphia by Dr. Astley Paston Cooper Ashhurst on "The centenary of Lister: a tale of sepsis and antisepsis," which is accompanied by the pleasing portrait of Lister as President of the Royal Society. Robert Hooke, one of the originators of the Royal Society and for many years its curator, is shown by Dr. W. S. Middleton to have been a man much in advance of his time, for he made many attempts to fly, was an early microscopist, and made experiments on telephony. Dr. A. H. Barkley tells us that Dr. Joseph Buchanan (1785-1829) was an inventor as well as a medical man; he designed an economical steam engine with spiral capillary tubes, and he also attempted to construct an airship. On the cover of this number is the portrait of Alexander Monro secundus, who, with his father and son, is discussed by Dr. S. William Simon; their tenures as professors of anatomy at Edinburgh covered the period 1719 to 1859. The second Monro, the ablest of the three, among other notable achievements invented the original stomach pump. His son was verbose, and it is stated that his editing of his father's essay and heads of lectures detracted considerably from their value. Dr. O. E. Denney of the U.S. Marine Hospital No. 66 (National Leprosarium) contributes an "Inaugurate medical debate on Elephantiasis or Lepra Arabum," translated by Chaplain Benedict Stretter from the original Latin and Greek of Benjamin Niesius, who defended this thesis in July, 1673, at Strasbourg. It closes with a eulogy to William Niesius, also a physician, but of him, as of the author, no further information is forthcoming. In the twenty-first instalment of palaeo-pathological studies Dr. Roy L. Moodie, in a generously illustrated article occupying thirty pages, describes the head injuries among the pre-Columbian Peruvians, which led to many of the trephining operations.

A second edition has appeared of Dr. D. C. MUTHU'S book on *Pulmonary Tuberculosis: its Etiology and Treatment*;[10] we reviewed the first on October 28th, 1922 (p. 805). In the new volume the original scheme and the philosophic outlook are retained. Although in many respects the orthodox teaching as regards etiology is rejected, yet the author's experience in treatment and his skill in setting out his case render a provocative book well worthy of study. It is only to be regretted that too many of the recommendations for after-care involve a return to a less artificial form of life than is at present possible for the majority of tuberculous patients, who are forced by financial considerations to live in crowded communities.

Smith's Medical Visiting Lists for 1928 (Nos. 3 and 4) are handy little volumes,[11] with ruled pages for visits, for obstetric and vaccination engagements, addresses of patients and nurses, and cash memoranda. The visiting list (No. 3) has space for seventy-five patients each week, with a weekly journal attached. It costs 7s. 6d., and can be obtained from Messrs. Hazell, Watson and Viney, printers and binders, 160, Shaftesbury Avenue, W.C.2.

[9] *Annals of Medical History.* Vol. ix, No. 3. Edited by Francis R. Packard, M.D. New York: Paul B. Hoeber, Inc.; London: Baillière, Tindall and Cox. 1927. (8¾ × 12¼, pp. 205-314; illustrated. Subscriptions in Great Britain, £2 2s. per volume of four numbers.)

[10] *Pulmonary Tuberculosis: its Etiology and Treatment.* By David O. Muthu, M.D., M.R.C.S., L.R.C.P. Second edition, enlarged. London: Baillière, Tindall and Cox. 1927. (Demy 8vo, pp. cxxi + 381; 28 figures. 12s. 6d. net.)

[11] *Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1928.* Eighty-second year. London: Hazell, Watson, and Viney, Ltd. (No. 3, cloth, 7s. 6d.; leather, 10s. 6d. No. 4, cloth, 10s.; leather, 12s.)

PREPARATIONS AND APPLIANCES.

"METALIX" X-RAY TUBE.

ONE of the notable pieces of apparatus shown at the recent exhibition in connexion with the inaugural meetings of the Röntgen Society and the British Institute of Radiology was the "Metalix" *x*-ray tube introduced by Phillips Lamps, Limited, of Charing Cross Road, London. There have been many changes in *x*-ray tube construction since the first models—weird-looking enough now, as seen in the collection at South Kensington—thirty years ago, but each tube has obviously evolved from its predecessor, whereas the "Metalix" tube is such a radical departure that at first sight one hardly supposes it to be an *x*-ray tube at all, partly because of its extremely small size and non-bulbular shape, and also because the rays are generated within a metal cylinder. The Philips "Metalix" tube is constructed to meet a variety of working conditions, but two types warrant special attention, one a radiator-cooled 90 ma. tube for radiography and screening, and the other a special tube for deep therapy. In the radiographic type it is claimed by the makers that the high load which the tube is made to stand is not at the expense of fine focus, and the tube is indeed provided with a "line" focus, the optical properties of which are well known. It is claimed for all these tubes that they embody their own protection.

RADIUM THERAPY.

REPORTS FROM RESEARCH CENTRES.

THE Medical Research Council, which is entrusted by the Government with a stock of radium salt for distribution, has issued a summary of the reports on the medical uses of this element received from centres for the year 1926.* Radium was supplied to nine clinical centres—namely, the Middlesex Hospital, University College Hospital, St. Bartholomew's Hospital, King's College Hospital, the London Hospital, St. Peter's Hospital, Birmingham General Hospital, Cardiff Royal Infirmary, and Aberdeen Royal Infirmary. In addition to this the London Association of the Medical Women's Federation receives radium for use in a group of hospitals, and radium salt is also allocated to the Irish Radium Committee in Dublin for distribution in Ireland. In an introductory note to this report of the Council it is stated that during the last five years it has become clear that these centres have followed three main lines of radium treatment—namely, a combination of surgical measures with radium, the introduction of this element into the tissues, and its superficial application. Reports for the year under review have been published elsewhere *in extenso* from University College Hospital, the London Association of the Medical Women's Federation, and the Irish Radium Committee.

Clinical Investigations.

The investigations considered in the report are classified, as in previous years, under six headings—namely, cancer of the breast; cancer of the cervix; carcinoma of the mouth, nasopharynx, larynx, and oesophagus; carcinoma of the rectum and bladder; sarcoma and lymphosarcoma; and experimental investigations.

Cancer of the breast was treated by surgical radium therapy at the Middlesex and St. Bartholomew's Hospitals, the radiological methods being appreciably different in the two cases, though the aim from the surgical point of view was the same. The employment of comparatively large quantities of radium acting for about twenty-four hours was the method adopted at the Middlesex Hospital, while at St. Bartholomew's Hospital a number of distributed foci containing small quantities of radium were allowed to act for about a week. By continuing such comparisons for a few years it is hoped that a decision will be reached as to which technique is the more advantageous. The Middlesex Hospital report describes the radium treatment of thirteen cases of recurrent carcinoma of the breast, eleven being radical operations, and two being local, or incomplete operations. In three cases recurrences disappeared finally; in seven they disappeared, but returned locally or elsewhere; and in three there was little or no improvement. The results of treatment of seven patients with recurrent carcinoma of the breast are also given: in four recurrences disappeared and did not return; in one case the growth was excised before treatment, and there was no recurrence; in two cases there was little or no improvement. Five primary growths were treated similarly; in four cases they disappeared without recurrence, and in one case there was great improvement. Surface radium therapy was tried at the Middlesex Hospital in seven cases of primary carcinoma of the breast with considerable benefit in most cases. It was also used in twenty cases of inoperable supraclavicular recurrences, and in thirty-three cases of nodular recurrences. Ten cases of recurrent carcinoma with cutaneous nodules were treated with radium in conjunction with x rays at King's College Hospital; the nodules generally diminished in size, and in some cases disappeared, but seven out of ten cases showed evidence of mediastinal involvement. Cardiff Royal Infirmary reported five cases of recurrent carcinoma treated with comparatively large quantities of radium for one to three days. Three patients were relieved, one was unrelieved, and one died.

Cancer of the cervix is discussed from the point of view of statistics and of current technique. University College Hospital reported that in fifty-eight inoperable cases traced from October, 1921, to October, 1926, six patients were alive, three of whom had recurrences, and fifty-two had died, the average duration of life being fifteen months. Of thirteen operable cases, seven were alive and six have had no recurrences. Of twenty-two cases treated with radium and subsequently by Wertheim's operation, five were alive without recurrences, and three, who also survive, have developed recurrences at the end of fifty-four, fifty-three, and eighteen months respectively. St. Bartholomew's Hospital reports on 196 patients treated with radium since May, 1921. In 146 cases the occurrence of haemorrhage before and after treatment was noted, and it was found that it ceased entirely in 124, with the exception of a return shortly before death in some cases. Hypertrophic growth disappeared in sixty out of sixty-nine cases noted. Of ninety-two cases of malignant ulceration this disappeared, temporarily or permanently, in sixty-two. Similar statistics are also reported from Birmingham General Hospital, Cardiff Royal Infirmary, and the Medical Women's Federation. Three main lines of technique were employed—namely, (1) the introduction of one or more radium tubes into the cervical canal, supplemented by applicators packed round the cervix in the vaginal fornices; (2) the introduction of one or more radium tubes into the cervical canal, tubes being inserted into the cervical tissues; and (3) the introduction of a large number of tubes of low radium content into the cervical tissues. The comment is made that the introduction of single tubes of radium into the cervical canal has been proved to be inadequate, unless it is supplemented in one of the ways mentioned.

Cancer of the mouth, nasopharynx, larynx, and oesophagus is dealt with in reports from St. Bartholomew's Hospital, the Middlesex Hospital, King's College Hospital, Birmingham General Hospital, Cardiff Royal Infirmary, and Aberdeen Royal Infirmary. There was a considerable increase during the year in the number of patients of malignant disease involving these sites who were treated with radium. It is added that the combination of surgery with radium has not yet been fully exploited in these situations. The comment is made in the report from St. Bartholomew's Hospital that primary growths of the mouth often yield to radium treatment, whereas the glands affected do not respond. It is thought that the resistance to radiation varies with the region where the growth arises and depends on some intrinsic quality of the tissues. The technique adopted in the case of carcinoma of the nasopharynx and larynx at St. Bartholomew's Hospital is described in detail; it includes the making of a large window in the thyroid cartilage so as to allow the needles to be placed as close to the growth as possible.

Sarcoma of the rectum and bladder is the subject of reports from St. Bartholomew's Hospital, Birmingham, King's College Hospital, Aberdeen, Cardiff, and St. Peter's Hospital. At Birmingham twenty advanced and inoperable cases of carcinoma of the rectum were treated, seventeen being columnar-cell carcinoma. Improvement was obtained in four cases, while eight were unbenefited and three patients died; the five remaining cases were too recent for any conclusions to be drawn. Colostomy is advised before treatment by radium is commenced, though removal of the coccyx is not advocated. St. Peter's Hospital reported upon the treatment of five cases of carcinoma of the bladder. In three cases no benefit resulted, apart from the arrest of the haematuria, but in two cases there was also considerable improvement in the general condition.

Sarcoma and lymphosarcoma are considered especially interesting in relation to radium treatment, because of the aim of the Radiology Committee of the Medical Research Council to establish some connexion between the results of radium therapy and the histological character of the growths. Evidence has been obtained that many of the sarcomata are highly sensitive to radium, growths of considerable size diminishing when adequate doses are given. Among the lymphosarcomata, however, there appears to be great probability of the recurrence of the

* Medical Research Council, Special Report Series, No. 116. *Medical Uses of Radium.* Summary of Reports from Research Centres for 1926. London: H. M. Stationery Office. 1927. Price 1s. net.

growth. An impression has been received that round-celled sarcomata do not do so well as the spindle-celled varieties, but later information throws some doubt on this.

Experimental Work.

Experimental work was continued at the Radium Institute by Dr. Mottram, who reported an investigation into the effect of beta radiations on Rous chicken tumour. He has also studied the action of these radiations on *Colpidium colpoda*. In the Middlesex Hospital report there is an account of experiments by Professor Russ and Miss Scott on the changes produced in the liver and tumour tissue of the rat by radon "seeds."

CONFERENCE ON "LIGHT AND HEAT IN MEDICINE."

WHAT was described as the first international conference on light and heat in medicine, surgery, and hygiene was held at the Central Hall, Westminster, from December 13th to 17th. It was organized by the *British Journal of Actinotherapy*, and the international character was given by the presence of four or five medical visitors from Paris and Berlin, who read papers. In the absence of Sir Alfred Mond the conference was opened by Dr. F. E. Fremantle, M.P., who sketched the enlarging field of actinotherapy, and especially the lead given to other countries by British medical men and scientists. He also referred, as did the chairman, Dr. R. King Brown, to the danger in untrained hands of the increasingly powerful arc and mercury vapour lamps. The sessions were well attended, some of them crowded, though it was stated that invitations had been issued only to medical practitioners and to others interested in the subject professionally, such as nurses engaged in the administration of light treatment under medical supervision.

At the first session a paper was read by Dr. L. G. Dufestel on contraindications for ultra-violet therapy. He mentioned the great caution necessary if it was employed in pulmonary tuberculosis, and said that old persons with very brittle or rigid arteries ought not to be irradiated, nor patients with acute or chronic nephritis, nor cases of uncompensated myocarditis. A similar ban was placed upon light treatment in albuminuria. Certain skin diseases, such as acute eczema or lesions with bullae, might be found to be aggravated by ultra-violet light treatment. In addition, there were cases in which contraindications only made their appearance after preliminary treatment—for example, cases of tuberculosis in which the result of light treatment was the rapid appearance of intense pigmentation with a fall in blood pressure. In nervous patients, too, the treatment was found occasionally to aggravate the nervous condition.

Some recent advances in actinotherapy were described by Dr. Albert Eidinow. A study of the effect of ultra-violet radiation on the bactericidal power of the blood had convinced him that the maximum increase in this respect was obtained with a minimal erythema dose of light and the irradiation of a surface area of skin corresponding to one-sixth of the surface area of the body. He had adopted a special line of treatment with lamps emitting shorter rays than 2,970 Angström units, exposing to a minimal erythema dose two or three times a week successive areas of the body equal to about one-sixth of the surface, and allowing an interval of ten or fourteen days before repeating the irradiation on the same area.

The use of light in combination with other remedies was the subject of a paper by Dr. F. Hernaman-Johnson. He said that most therapeutic agents acted by stimulating the natural defensive powers of the body, and the benefit from the carbon arc was very similar to that from natural sunlight. Failing the carbon arc, a kind of "synthetic" sunlight might be produced by high candle-power incandescent lamps and non-erythema-producing rays from mercury vapour. He claimed that light treatment could imitate, at least in some degree, the effects of a great many drugs. It could take the place of iron and arsenic in anaemia and debility, of strychnine as a tonic, and, in a little time, it might even render the use of such things as headache powders unnecessary. It could not replace endocrine extracts, but their administration could safely be combined with light.

Dr. F. Howard Humphris discussed the parts played by the chemist and physicist in actinotherapy, and prophesied that more would be discovered about the specific therapeutic effects of different wave-lengths of light and that the present clumsy method of using the whole light from any source would be abandoned. The wave-length of the light required for any particular treatment would be isolated by means of filters, which could, at the same time, serve as a protection to the patient. At present he thought such filters as existed in the ultra-violet region of the spectrum were rudimentary. A filter might yet be devised which would "cut out the sunstroke-causing rays of Hindustan and give only the healthful rays of Honolulu."

The irradiation of foodstuffs and the relation thereto of vitamin D was treated by Professor I. M. Heilbron, who gave a few examples of research work in this field. It had been discovered that cholesterol itself was not a provitamin, but contained a minute quantity of another substance readily detected by means of the spectroscope, to which the antirachitic properties were attributable. The provitamin was probably identical with ergosterol, a substance present in large amount in yeast and in a small amount in human and animal skin. Professor Heilbron emphasized the importance of team research in this new science of actinology, which promised to be so fertile in the treatment of disease. Professor Leonard Hill also gave an address on scientific research in relation to the practice of actinotherapy, dealing particularly with the relative energy of ultra-violet in sunlight and in artificial light sources.

One session was occupied with the place of actinotherapy in public health work, Dr. H. Stanley Banks giving an account more particularly of the treatment of rickets by light at a welfare centre in Scotland. In some 120 cases treated with twenty or more light baths from both the carbon arc and the mercury vapour lamp, 95 per cent. showed complete healing and the remainder partial healing. He held that artificial sunlight clinics at child welfare centres were well worth the trouble and expense involved, not only for the good in the individual case, but for their educative value to parents, who were led to appreciate what natural light and fresh air meant to their children. In school medical work actinotherapy was useful, and he had had experience also of its value in isolation hospitals; light was specially helpful as a general tonic after all acute fevers. The subject of rickets was also dealt with by Professor K. Huldschinsky of Berlin, who spoke of the value of irradiation from the preventive point of view.

Among other contributions were papers by Dr. Franz Nagelschmidt of Berlin on 'bioluminescence," and Dr. Jean Snidman of Paris on the therapeutic value of infra-red rays. Dr. F. W. Edridge-Green gave a demonstration of colour vision, and several papers were read in a special section dealing with the eyes, including one by Dr. I. Spiro on general, as distinct from local, ultra-violet irradiation in certain common eye conditions, such as keratitis and corneal ulcer. Although "heat" as well as "light" was included in the title of the conference, there were few papers on that subject, but Dr. E. P. Cumberbatch gave an interesting account of recent advances in diathermy, drawing upon his experiences during a visit to America.

Concurrently with the conference an exhibition was held to which all the principal firms engaged in the manufacture of light apparatus and accessories appeared to contribute. The tendency of the new models of lamps shown was certainly towards portability. There were, in addition to lamps for treatment, many others for general or special illumination. An interesting exhibit was a lean-to structure glazed with vita-glass, and another was an exhibit by the Bermondsey Borough Council, which, as was reported in our issue of September 24th (p. 565), has installed a solarium, equipped with a dozen carbon arc or mercury vapour lamps, the outcome, as Dr. King Brown (medical officer of health for Bermondsey) told the conference, of a visit he had paid to the sunlight clinic of Dr. Rollier at Leysin.

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CRIMINAL LAW AND INSANITY.

On November 16th the Lord Chief Justice began his David Lloyd Roberts Lecture on criminal law and insanity[1] by regretting that there should be any difference between the legal and medical professions in their views upon the actual and the proper attitude of the criminal law towards insanity. After a lucid exposition of the existing legal theory and practice Lord Hewart passed—strangely enough in view of such an opening—to a severely adverse criticism of the recommendations of the Atkin Committee, a body which consisted of nine distinguished lawyers, appointed by Lord Birkenhead when Lord Chancellor in 1922, in deference to the widespread uneasiness caused by the case of Ronald True. That exclusively legal body, far from emphasizing the cleavage between legal and medical opinion on this point, actually endorsed the main recommendation on the subject submitted by a special committee of the British Medical Association—namely, modification of the Rules in M'Naghten's case by the recognition that "a person charged criminally with an offence is irresponsible for his act when the act is committed under an impulse which the prisoner was by mental disease in substance deprived of any power to resist."

Publication of reports of the David Lloyd Roberts Lecture provoked some comment in the lay press, notably a spirited apologia for the Atkin Committee from Sir Herbert Stephen, himself not the least distinguished signatory of its report, which he characterizes as not "dead," as Dr. John Carswell, in an earlier letter to the *Times* on the subject, seemed to infer, but "nearly five years old." We may take comfort in the reflection that, as Sir Herbert Stephen observes, "legal reform in this country sometimes takes a long time arriving, but arrives eventually nevertheless." Meanwhile we turn from the contemplation of so distant an event to a point upon which the Atkin Committee and Lord Hewart appear to be substantially agreed. "In our opinion," says the Committee (referring to the report of a committee of the Medico-Psychological Association in 1896), "in 1923, as in 1896, to the insane person justice is done." This may well be, for the law has fenced the insane round with many safeguards other than the limitation of criminal responsibility set out by the Lords in the M'Naghten case. Juries are apt to make short work of legal definitions which run counter to their sense of natural justice—as Sir Herbert Stephen points out in the letter already quoted—and even, we may add, of obvious facts. If such excess of zeal may tend at times to the disadvantage of the accused, there is always the Court of Appeal to correct so untoward a result; whilst in cases not involving a capital charge the judge can apportion the punishment to the degree of criminality, making allowance for the weakened or disordered intellect. Finally, there remains the protection conferred by Section 2 of the Criminal Lunatics Act of 1884, which provides for medical examination and certification of prisoners, and vests in the Home Secretary a discretionary power to act upon any certificate of insanity secured in such circumstances. Under this Act the Home Secretary has to consider primarily not the legal question of responsibility, but the medical question, "What is the prisoner's present state of mind?"—a question the answer to which may well involve a review of the original finding as to responsibility.

But if to the insane justice is indeed done, it is at times by ways which, to the medical mind at least, would appear somewhat devious. This reflection is prompted by examination of page 5 of the *Times* of December 13th, which contains reports of no fewer than five cases in which the question of the prisoner's sanity or insanity was a material issue; the opening of a sixth case of this class is recorded on another page of the *Times* of the same date. Three of the five cases were appeals from convictions of murder, of which two were dismissed by the Court of Criminal Appeal and one allowed.

The first two appeals call for little comment here. In the case of John Thomas Dunn the defence put forward at the trial had been that the dead woman committed suicide; the issue of insanity had only been raised incidentally, and counsel for the defence had not asked the jury for a special verdict. In these circumstances, as the Lord Chief Justice said in dismissing the appeal, a plea of misdirection on the ground that the judge had ruled that there was no evidence on which a special verdict could be founded was a plea wholly inconsistent with the defence, and a *reductio ad absurdum* of appeals in murder cases. In the case of Rex *v.* Kirby—a second case of wife murder in which the appeal was dismissed—the original defence had been one of insanity. The grounds of the appeal were certain alleged misdirections in the summing up. The Lord Chief Justice, in delivering judgement, said that in 1915 Kirby was discharged from the army as insane. Early in 1925 he underwent a serious operation which, it was said, would be likely to increase his liability to a return of mental trouble, especially in view of the fact that he had financial worries. The jury had before them the opinion of a doctor that Kirby was insane for just that space of time in which he committed the crime, and they came to the conclusion that the defence of insanity had not been made out. There was no ground for complaint of the summing up, and the application was refused.

In the third case the court allowed the appeal, substituting a verdict of "Guilty but insane" for the verdict of "Guilty" returned by the jury at Durham Assizes against Edward Lloyd, a miner, who shot a police constable at Hylton, Durham, last June. The original defence had been one of insanity. At the hearing of the appeal Mr. Paley Scott, for the Crown, said that Lloyd had shown no sign of legal insanity before the crime or after it, and no medical witnesses were called at the trial to prove that he was insane. Commenting upon this failure to call medical witnesses Mr. Justice Avory expressed the opinion that "the evidence of ordinary witnesses is often better than that of experts on these matters." At the original trial considerable sympathy was excited, and the judge, after directing the jury as to the alternative verdicts open to them, added that it would be right to accompany a verdict of guilty of murder with a recommendation to mercy, in which case he, as presiding judge,

[1] BRITISH MEDICAL JOURNAL, November 19th, 1927, p. 949.

would be asked whether he agreed with that recommendation, which would not be lightly disregarded. Thus instructed, the jury returned a verdict of guilty of murder coupled with a strong recommendation to mercy, in the evident belief that such a verdict would prove the most merciful to the prisoner. The Court of Criminal Appeal, satisfied that Lloyd was actually insane when he committed the act charged against him, and that in all probability the jury would have found a verdict of guilty but insane had it not been for the direction of the judge, rectified the error. The Lord Chief Justice, in giving the judgement of the court, said that: "Lloyd had been described as having been a 'very decent sort of chap' before the war. His military medical records showed that in 1916 he was removed from duty in the field in France suffering from exposure, exhaustion, and shock, and that after that date grave records were made of his mental condition. In September, 1925, he was described as having a childish mentality, and as being 'asocial,' unstable, and emotional. In 1926 he was said to be a 'congenital mental defective.' His wife said at the trial that he had always been a good husband, but that last Christmas he had attacked her with a rolling-pin without any reason. On certain occasions he had seized his father-in-law by the throat, and, on being told afterwards what he had done, he had wept. Sometimes it had taken six or seven men to prevent his injuring himself and others."

We should have thought that there was here abundant material for the medical evidence which Mr. Justice Avory considers inferior to that of the ordinary witness. Possibly his attitude is determined by the fear expressed by Lord Hewart of a time when the decision of the question whether a great number of ordinary criminals should be held responsible to the law may be transferred to a section of the medical profession. We are not impressed by this fear. The legal definition of criminal responsibility and the scientific description of mental disease are and will remain different questions, but if full justice is to be done it will be well for the law to take cognizance of progress in medical as in other sciences. In this the Right Hon. H. P. Macmillan, K.C., chairman of the recent Royal Commission on Lunacy and Mental Disorder, would seem to agree with us, to judge by a statement he made when discussing the general functions of the expert witness, at the joint meeting of the Section of Neurology of the Royal Society of Medicine and the Medico-Legal Society on December 8th. The law, he said, had learnt from medicine to discriminate with more justice, but it would never overtake medicine in the precision with which certain questions could be determined.[2]

In the fourth case James Gillon, a gardener, was convicted at Sussex Assizes of the murder of his sister Annie Gillon, a maid employed in the same household. Evidence was given to the effect that after a disagreement with her brother the woman refused to get his supper one evening or his breakfast the next morning, whereupon he attacked her with a razor, inflicting wounds from which she subsequently died in Horsham Hospital. Dr. F. R. P. Taylor, medical superintendent at Hellingly Mental Hospital, called for the defence, said (we quote again from the *Times*) that "he had examined Gillon last Friday, and from the history prisoner gave came to the conclusion that he was a high-grade mental defective, having developed premature degeneration of the nerve cells of the brain. He developed the idea that he was inferior to other people, known medically as the 'inferiority complex.' He showed definite symptoms of delusion and persecution, which were progressive and were one of the forms of mental disease in which a patient was likely to develop homicidal tendencies. Probably the accused man knew legally he was doing wrong, but morally thought he was doing right." In reply to questions Dr. Taylor said that he thought Gillon knew he was taking the woman's life, but that he was undoubtedly insane. He did not show the slightest emotion when the dying depositions of his sister were read over to him. The jury returned a verdict of guilty, and sentence of death was passed.

In the last of the cases reported on December 13th Susan Eliza Turner, a charwoman of 60, charged on indictment and on a coroner's inquisition with manslaughter of her daughter, a woman of 40, was found guilty by a jury and sentenced to ten years' penal servitude. The prisoner and her daughter had lived in a room in Walworth for many years past, both mother and daughter doing charing work until about ten months ago, when the latter disappeared and was not seen again. Apparently she was concealed during the whole period in the room shared with her mother until November 6th, when a fellow lodger and the landlady were called in by the mother, and the daughter was found in bed unconscious. A doctor was summoned, and the patient was removed to the infirmary, where she died on November 10th. The medical evidence was that the dead woman's body was very well nourished; that death was due to blood poisoning consequent upon an ulcer on the hip-joint and general neglect; and that if she had had medical attendance her life would have been saved. In this case the jury had first to find whether the prisoner was insane so that she could not be tried. Dr. Morton, governor and medical officer of Holloway Prison, gave evidence that the prisoner had the mentality of a child of 6½ years. She was unable to answer quite simple questions; she had to count her fingers before she could say how many she had on her hand; she could not read or write; she did not know the date of the year; she knew that there were twelve pennies in a shilling, but she did not know a half-crown, or how many shillings went to the pound. He thought she was unable to take any intelligent interest in her trial. Dr. Morton, when asked about the prisoner's statement that she locked the door "because she said that if I did not she would go out and make away with herself; she was very lazy and would not do anything for herself; she was old enough, I think, to shift for herself," said that this was practically the same reply that the prisoner always made—that the dead woman was old enough to look after herself.

On this evidence the jury found that the prisoner was not insane and was able to take her trial. On the prisoner being found guilty the judge (Mr. Justice Talbot) passed sentence of ten years' penal servitude, saying that it was necessary in her own interest to sentence the prisoner to a long term of imprisonment. In prison her health, mental and bodily, would be well looked after, and any special treatment she needed would be given her. His Lordship also expressed the opinion that, whilst the action of the jury had made it impossible to send the woman to a criminal lunatic asylum, that was where she would probably be sent ultimately; she would be carefully watched in prison.

So, in spite of difficulties, justice is perhaps done to the insane. But whether the law has reason to be proud of its manner of doing so is a point on which opinions may differ.

[2] BRITISH MEDICAL JOURNAL, December 17th, 1927, p. 1145.

VITAMINS AND DISEASES OF THE EYE.

EVER since the discovery of "accessory food factors" by Sir F. Gowland Hopkins in 1912 it has been universally recognized that the lack of these substances, now known as vitamins, in the diet leads to such marked disturbances of the general metabolism as to produce a number of definite and specific diseases—namely, rickets, scurvy, beriberi, and pellagra, collectively known as the deficiency diseases. It has, however, not been so widely recognized that there are local as well as general disorders which can be included under the heading of deficiency diseases, and these may be well exemplified in the case of the eye, certain diseases marked by eye symptoms having long been attributed by ophthalmologists to an ill balanced or deficient diet. These ocular disorders have recently been well described by Adler[1] of Philadelphia. The three diseases of the eye described as being definite deficiency diseases are xerophthalmia (keratomalacia), certain forms of cataract, and night blindness. Changes in the eye due to deficient or ill balanced diets similar to those now recognized as xerophthalmia were described under various other names long before the discovery of vitamins. As early as 1857 Dr. Livingstone described an affection of the eyes in members of his party during his explorations in Africa, stating that "the eyes became affected (as in the case of animals fed in experiment on pure gluten and starch)." Again, in 1865, under the name of ophthalmia Brasiliano, Gama Lobo described a disease of the eyes affecting poorly nourished slaves on Brazilian coffee plantations, and in 1896 the Japanese observer Moro of Tokyo reported an epidemic of severe inflammation of the conjunctiva and cornea attributed to the absence of fat in the diet. Russian ophthalmologists have also ascribed the high incidence of certain inflammatory diseases of the eye in their country to the insufficient and poor food taken during the Lenten fasts. Again, before the discovery of the fat-soluble vitamin a somewhat similar disease was produced experimentally in the eyes of rats by Falta and Noeggerath in 1906, and the observation was confirmed by Knapp in 1909. This disease was thoroughly investigated by Mendel and Osborne in 1913, who proved that it was caused directly or indirectly by a diet deficient in the accessory substance which had by then come to be known as the fat-soluble vitamin A. They also showed that by the addition of butter-fat or cod-liver oil containing the fat-soluble vitamin A the xerophthalmia experimentally produced in rats could be cured. The occurrence of xerophthalmia among rats has now come to be accepted as a criterion for the adequacy or the inadequacy of vitamin A in the diet. Rats which have been kept on a diet deficient in vitamin A for four to six weeks suffer from swelling of the lids and lacrymation. A discharge, first haemorrhagic, then purulent, ensues. The cornea becomes cloudy, ulcerates, and the eye is lost. Human xerophthalmia commences with the formation of white plaques on the conjunctiva, constituting xerosis conjunctivae, or Bitot's spots. Cloudiness and softening of the cornea follow, with ulceration and loss of the eye, although acute suppuration is seldom observed. It remains to be seen whether this human xerophthalmia is identical in origin with that of the rat, but Bloch has described an outbreak of xerophthalmia in one division of an institution for children in Denmark. In all the divisions the diet of the children was identical, except that in that affected it contained no butter, eggs, cream, or whole milk. When cod-liver oil was added to the diet rapid recovery ensued. Again, Widmark showed that practically all the butter made in Denmark was exported, and margarine eaten instead. In December, 1917, owing to the German submarine blockade, the Government took over the control of all the butter, which was then rationed so that everybody received 250 grams a week. From that date xerophthalmia practically disappeared. Whether other factors also enter into the etiology of xerophthalmia, such as bacterial infection or the character of the inorganic moiety of the diet, as in the so-called "salt ophthalmia," has been much disputed, and McCollum and Simmonds express doubt "whether a deficiency disease ever occurs uncomplicated in man or animals." In addition to xerophthalmia, certain cataractous changes in the lens have been considered to be dependent on a vitamin deficiency, but the evidence is conflicting. Night blindness has also been described as a symptom often observed as accompanying or preceding xerophthalmia. Night blindness is, however, a symptom which occurs in many diseases under varying conditions. A consideration of its pathological physiology, however, indicates that in all cases we are dealing with some disturbance of what Sir John Parsons terms the scotopic mechanism—that is to say, with some defect in the functions of the rods and visual purple. Night blindness is often associated with xerophthalmia, but may occur in its absence. It is of interest to note that the treatment of this condition dates back to Hippocrates, who recommended the use of liver in abundance, which is now known to be rich in the fat-soluble vitamin A. The subject has also been studied experimentally in the rat, and a consideration of the results obtained would show that vitamin A starvation in rats produces a defect in the functions of the visual purple, as shown by its slow regeneration after it has been bleached through exposure to intense light, and that this abnormality occurs at an earlier date than do the pronounced symptoms of xerophthalmia.

[1] *Archives of Ophthalmology*, November, 1927, pp. 593-611.

LONDON WATER.

THE Royal Society of Medicine held a social evening at 1, Wimpole Street, on December 14th, when the president, Sir James Berry, and Lady Berry received a large number of Fellows and guests. The feature of the evening was a lecture by Sir Alexander Houston, director of water examinations, Metropolitan Water Board, who spoke on the romance of London's water supply. In the library the method of chlorination of the water was demonstrated in a small plant, and there were other exhibits, some of them dating back to a pre-scientific era, such as a wooden water main which had been excavated from the neighbourhood of the society's house, and had probably been laid in the reign of William and Mary. On more than one occasion, in reviewing Sir Alexander Houston's lively reports on a subject which in any case could not be called dry, we have commented on the fascinating story of "the watch on the river." Sir Alexander Houston asked his audience whether the word "romance" was ever more fittingly applied than to the task of supplying a highly purified water to the great population of the metropolis. The magnitude of the task is itself romantic. The storage reservoirs of the Metropolitan Water Board number 49, covering 2,704 acres, and holding 20,000 million gallons. The service reservoirs number 91, covering an equal number of acres, and holding 323 million gallons. There are 172 filter beds, covering as many acres, engines of a total of 44,000 horse-power, and water mains extending for 6,725 miles. The result is to bring to the taps of London every day 250 million gallons, or 37 gallons for each inhabitant. Sir Alexander Houston pointed with pride to the virtual absence of typhoid fever from the county of London during the present century, though there had been epidemics in the provinces, notably at Lincoln in 1905. He did not claim that this result was entirely or mainly due to an improved water supply; it was due to an improvement in sanitation generally; but he thought the waterworks engineer could claim some of the credit. Thames water, which accounted for 60 per cent.

of the London supply, was purified by storage, chlorination, and sand filtration. There had been a wonderful improvement, he said, in the quality of the water consequent upon storage. Some telling slides were exhibited, contrasting, for example, Thames river water before storage and Chelsea storage water; on the *B. coli* test the latter showed an improvement of at least one hundred times. Unfortunately, storage encourages the development of algal and other growths in the reservoirs, such as Asterionella, Fragilaria, Dinobryon, Oscillaria, and Tabellaria. These, while quite harmless, give rise occasionally to taste troubles. One method of overcoming this is to treat the water with innocuous chemicals suspended in sacks over the sides of a boat, which roams the reservoir until the chemical is dissolved. The filtration process is also full of interest; it is very slow, less than two gallons of water per square foot per hour being filtered; the filter bed seen in section shows 36 inches of fine sand, below this 12 inches of coarse sand, then 9 inches of fine gravel, and 9 inches of coarse gravel. With regard to chlorination, this process, it will be remembered, was first adopted on an extensive scale during the war, mainly to save coal used for pumping, but the result also was to yield a better water bacteriologically than would have been the case had it undergone prolonged storage. Sir Alexander Houston did not forget to pay a tribute to Sir Hugh Myddelton, who, at the beginning of the seventeenth century, conferred a great boon upon London by bringing thither the New River from Amwell and Chadwell in Hertfordshire. He described Myddelton as truly one of the pioneers of preventive medicine. Sir William Hale-White, in proposing a vote of thanks, said that the audience must be extremely grateful for the lecture, and still more for the achievement which the lecture narrated, even though some, like himself, felt chastened because they had known so little and taken for granted so much.

THE PROTECTION OF MOTHERHOOD.

In 1923 Dame Janet Campbell, senior medical officer for maternity and child welfare, Ministry of Health, produced two reports bearing on the subject of maternal mortality; one dealt with the education of the medical student in obstetrics, and the other with the training of the midwife. In the following year a further report by her, on the causes of an excessive maternal death rate and the means for its reduction,[1] was issued by the Ministry, and a notice of it appeared in the BRITISH MEDICAL JOURNAL of April 12th, 1924 (p. 682). That report aroused great interest in the medical profession, and some of its statements and implications were strongly criticized, more particularly by general practitioners. Seldom indeed has a public medical document led to so much controversy in our columns and elsewhere. One effect was a resolution by the Council of the British Medical Association, adopted on December 17th, 1924, declaring that it could not accept the opinions expressed in Dame Janet Campbell's report as to the causation of puerperal morbidity and the inferences which had been drawn therefrom. Another effect was the appointment by the Council of a special committee to inquire into the matter generally. That committee has met many times since its first appointment in February, 1925, and an interim report by it appeared in the SUPPLEMENT to our issue of January 9th, 1926. We now have to record the issue this week by the Ministry of Health of another report from Dame Janet Campbell, supplementary to the last, and entitled *The Protection of Motherhood*.[2] In it she reviews the existing position of the problem in England and Wales, supplies the latest available statistics, discusses anew the vexed question of puerperal infection as illustrated by a number of recent outbreaks, and sets out what she regards as the necessary provisions for a complete maternity service. Her concluding paragraph speaks of the protection of maternity as being part of a comprehensive scheme of safeguarding and improving the public health, "but it is basic and fundamental because it is only upon a foundation of healthy, happy, and contented motherhood that we can hope to build up a Nation sound in mind and body. We shall be wise, therefore, to neglect nothing which will ease the burden of childbearing and relieve it, as far as may be, of its weariness and its dangers." A prefatory note is contributed by Sir George Newman, Chief Medical Officer of the Ministry of Health, and an appendix on the pathology of puerperal pyrexia by Dr. Arthur Eastwood, senior bacteriologist to the Ministry. The report will no doubt be studied with close attention by the medical profession at large, and not least by general practitioners. Meanwhile we reserve comment to a later issue.

[1] Reports on Public Health and Medical Subjects. No. 25. *Maternal Mortality*. By Janet M. Campbell, M.D., M.S. London: H.M. Stationery Office. 1924. 1s. net.
[2] Ibid. No. 48. *The Protection of Motherhood*. 1927. 9d. net.

FRENCH VITAL STATISTICS.

One of the most valuable of the series of statistical handbooks issued by the Health Organization of the League of Nations deals with the official vital statistics of the French Republic. There are considerable differences between French and English practice, and a general outline of the French procedure will be interesting. In France the census, which is taken quinquennially, is designed, first, to enumerate the legal population of areas for the purposes of government and taxation, and secondly, to ascertain specified data regarding all persons. Since 1896 the instruction has been to concentrate on civil condition and occupation in alternate censuses. In 1921, however, the census included both. The census agents, appointed by mayors of communes, are each responsible for a district containing from 100 to 200 persons. The census agent makes preliminary inquiries, issues, recovers, and checks the schedules, of which one is prepared for each person, and delivers them, together with a house bulletin and memorandum, to his census supervisor. The supervisor sends them, with a summary report, to the mayor of the commune. The mayor prepares a nominal roll of the inhabitants in duplicate, retains one copy for the communal archives, and forwards the other, with a summary statement and all the schedules, to the prefect of the department. The accumulated papers are finally sent by the prefect to the General Statistical Office of the Ministry of Labour, where they are scrutinized. The results are published as the census report. The prefects also prepare departmental summaries, which are consigned to the Minister of the Interior. The birth of a living child must be declared within three days by the father, or in his absence or default by the doctor or other person, on pain of fine or imprisonment. The declaration is made to the registrar, who draws up the *acte de naissance*. There are special provisions for the recognition of illegitimate children by their parents. Stillbirths must be similarly declared, but it is not now necessary to submit the body to the registrar. A death must be declared before the registrar by a relative of the deceased or other appropriate person. Declaration, by custom, is made within twenty-four hours, but no time limit is prescribed. The mayor of the commune or his deputy is the sole competent authority for drawing up the *acte de décès*. The body in all cases must be viewed by an authorized verifier, to verify the fact of death, lest premature burial occur. The *acte* contains no information as to the cause of death. As the medical practitioner in attendance is not required to give a certificate—though some do—the medical or other verifier who views the body endeavours to trace the cause of death by inquiry. The

reliability of the data so ascertained varies, and the official record in some cases may merely reflect the views of relatives or neighbours. The sole official list of causes of death is the "Abridged International," which contains thirty-eight numbers. The registrar in most communes draws up a special bulletin setting forth, among other facts, the cause of death. The mayors of communes transmit the bulletins drawn up by their registrars, together with a covering summary, to the prefect of the department, and the prefect hands them on, also with a covering summary, to the General Statistical Office. The general mortality returns are published in the *Statistique du Mouvement de la Population*. The infectious diseases compulsorily notifiable in France are eighteen in number. They include most of those named in the English Infectious Disease Notification Act, with the addition of plague, yellow fever, and some others. For nine further diseases notification is optional. Responsibility to notify rests with medical practitioners, public health officers, and midwives. Notification is required to be made, forthwith and in duplicate, one form to the prefect or subprefect of the department and the other to the mayor of the commune; notification forms, in the shape of letter cards with counterfoils, made up in books, are issued free. In order to ensure professional secrecy the disease is referred to by number only, according to a list of numbered diseases printed inside the cover of the book of cards. The practitioner is under penalty if he fails to notify; he is under penalty also if he infringes medical confidence; in this dilemma it is understood that he sometimes withholds notification. A register of notifications is kept by the prefect, who sends a monthly summary to the Department of Health of the Ministry of Labour. A general statement based on the summaries is published annually. In most departments and large towns a bacteriological laboratory service is provided for medical practitioners free of charge. In diseases compulsorily notifiable disinfection also is compulsory. In the case of poor persons it is carried out free of charge. Others pay on a sliding scale according to income and size of house. In diseases optionally notifiable disinfection may only be carried out with the consent of the families concerned. Vaccination and two revaccinations are compulsory in France. For pulmonary tuberculosis, which is one of the optionally notifiable diseases, there are 500 dispensaries and 54 sanatoriums, with 7,000 beds. For venereal disease, which is not notifiable, dispensaries have been organized, and special facilities are provided for pregnant women, nursing mothers, soldiers, sailors, prisoners, and prostitutes.

TRISTAN DA CUNHA.

IN connexion with the little exhibit of Tristan da Cunha in the South African pavilion at the British Empire Exhibition a handbook was prepared by Mr. Douglas M. Gane. He has now brought out a further edition describing the place in the Empire of this "loneliest British possession," the condition of its inhabitants, and the efforts that are being made, especially by the Tristan da Cunha Fund and the Society for the Propagation of the Gospel, for their welfare. The 150 people who live on this extinct volcano in the South Atlantic do not appear to be so completely isolated from the rest of the world as formerly. From time to time big liners crossing the Atlantic on world tours call at the island, and leave letters and stores, so that there is hope that the inhabitants may escape in future the severe privations to which in the past they have been exposed. The Tristan da Cunha Fund hopes to achieve three ends: to establish periodical communications with Cape Colony, to form an affiliated settlement on the South African mainland, and to cultivate the rudiments of an administrative authority with benevolent ultimate jurisdiction vested in a visiting warship. Some years ago a proposal was made to transfer the population to the mainland, but many refused to leave their homes, notwithstanding the hardships to which they are constantly exposed. Mr. Gane suggests that an affiliated settlement would relieve conditions on the island whenever the number of people exceeds its capacity to sustain them. Moreover, whether we agree or not with his view that Providence has designedly put such places as Tristan da Cunha in our hands for the purpose of protecting the British Empire, there may be something in his contention that such outposts may some day prove useful as a second string to the Suez Canal. The men of Tristan da Cunha have on several occasions been of assistance to shipwrecked mariners. For these reasons a periodical visit by a warship, conveying stores to this outpost of empire, may well be justified.

CHINESE HOSPITAL, SHANGHAI.

THE fine way in which British hospitals in China are holding their own when they are given the smallest chance of doing so is illustrated by the annual report for 1926 of the Chinese Hospital in Shanghai. This institution is controlled by British trustees and staffed by members of the London Missionary Society. The eighty-first annual meeting was held early in June, and the chairman expressed the hope that within a year the projected rebuilding would have become a fact. Under the will of Mr. H. Lester, a British resident in Shanghai, who died in May, 1926, an adequate sum has been provided for the replacement of the present old and inconvenient buildings by a well equipped modern hospital. It is proposed to begin the work of reconstruction before the end of this year, and efforts will be made to continue the activities of all the hospital departments during the rebuilding period. A convalescent home is to be established shortly in the outskirts of the settlement in order to give both the patients and members of the staff the advantages of change of air and scene. Dr. C. J. Davenport, who died in September, 1926, began work in the Shanghai Hospital in 1904, and was primarily responsible for the great advance subsequently made. Dr. H. Fowler, who has been the acting medical superintendent since the death of Dr. Davenport, comments on the increased work thrown upon the hospital by the armed robberies and assaults which, in spite of all the efforts of the excellent Shanghai police, have filled the surgical wards with seriously injured Chinese men, women, and children. He adds that casualty work, always a notable feature of this hospital, has continued to increase with the growing congestion of traffic in the crowded, tortuous, and narrow streets of the settlements. In the section of the report devoted to the women's hospital it is announced that an annual physical examination has now been arranged for the Chinese women nurses; this has been found essential in view of the prevalence of tuberculosis in China, where the girls are without the early physical training and out-of-door habits of their British contemporaries. With the provision of the new convalescent home it is hoped that nurses showing consumptive tendencies will be able to overcome them.

THE EDITOR OF THE BRITISH MEDICAL JOURNAL.

THE Council of the British Medical Association, at its last meeting, on December 14th, received the resignation of Sir Dawson Williams, M.D., LL.D., D.Litt., D.Sc., who will shortly complete his thirtieth year as Editor of the BRITISH MEDICAL JOURNAL, and who before his appointment to that post in January, 1898, had for seventeen years been connected with the Editorial Department. At the same meeting the Council appointed Dr. N. G. Horner, who has been Assistant Editor for the past eleven years, to succeed Sir Dawson Williams as Editor.

Nova et Vetera.

RICHELIEU AND THE SORBONNE.

THREE hundred years ago Richelieu approved the plans of the architect Lemercier for the reconstruction and enlargement of the Sorbonne, the college which had been founded in 1257 by Robert de Sorbon. The fame of this great Paris institution is known throughout the learned world, but probably few could give an account of its history. It is therefore opportune that Professor G. Dupont-Ferrier, of the Ecole des Chartes, now lodged in the building, should have celebrated the anniversary by contributing an illustrated article to the *Revue Scientifique* of Paris.

Robert de Sorbon, whose parents were peasants in the Champagne, became chaplain to Louis IX, over whom, though he was little of a courtier, he had great influence. He established his college as a home for students and teachers at a date probably earlier than any college at Oxford or Cambridge, and he left to it his name and his fortune. His desire was to help poor students and teachers in theology, and to counter the monopoly of power enjoyed at that time by the mendicant friars. Consequently many of the distinguished early teachers in the Sorbonne were strong adversaries of the mendicant orders. The students for whom Robert de Sorbon provided had long been the victims of predatory lodging-house keepers, who increased the students' difficulties by letting adjoining rooms to *filles de joie*. With aid solicited from the King, the Queen, nobles, prelates, and foreigners, Robert was able to establish his *pauperrima domus*. His regulations remained in force down to the time of the French Revolution.

The personnel of the college was formed of foundation scholars, foreign students who paid their way, associates, and guests. The last named had no part in the administration of the community, but hoped to be incorporated in the ranks of the *Socii*, who remained associates for the whole of their lives. The governance of the college was in the hands of a master, assisted by a prior who maintained discipline, and a proctor who managed the finance. A registrar and a librarian completed the governing body: all the offices except that of master were annual appointments. The officers were controlled by three councils, one to supervise the observance of regulations, the second for finance, and the third concerned with the discipline and good behaviour of the students. All the members of the community met together at various assemblies. In the fifteenth century two-thirds of the masters in theology belonged to the Sorbonne; and in the sixteenth century its authority had become so great that difficult cases of conscience were submitted for its decision. Many of its professors were not only doctors in theology, but also in law and medicine. The position of the college became so important in theology that it has sometimes been confused with the Faculty of Theology in the University, an error into which even such men as Luther, Pascal, and Voltaire fell.

A library was attached to the Sorbonne by its founder; and it was at the Sorbonne that the first printing presses in Paris were installed. The greatest care was taken in the preservation of the books in the library; but lending was allowed under strict precautions. While most of the colleges founded later only admitted students from certain provinces, dioceses, or towns, the Sorbonne, like the University of Paris, welcomed from the first the attendance of foreigners.

To this foundation of Robert de Sorbon the cardinal-duke Richelieu was appointed master in 1622. Richelieu, who was born in Paris, was not a Sorboniste, but was educated at the rival college of Navarre. Nevertheless, he became imbued with a deep affection for his adopted college; desiring to give it a more worthy home, he, with the help of Lemercier, converted the cloister of Sorbon into the Palace of Sorbonne. The original site of the buildings was retained, but was increased by one-third towards the south. The new construction was in the form of an irregular quadrangle. Richelieu's white stone and red brick edifice remained until it was pulled down and rebuilt at the end of last century. Now all that remains of his building is the chapel, which contains Richelieu's tomb, the work of Girardon (1694). But the Sorbonne of Richelieu, the college for students of theology, was destroyed during the revolution (1792), though teaching in this and other subjects was resumed in 1821. In addition to the library, the buildings now house the École des Chartes.

During its long career the Sorbonne, according to Professor Dupont-Ferrier, maintained its traditions of fraternity, poverty, work, and modesty. The Sorbonistes took their meals in common, with friendly discourse; they played tennis together in their garden. Poverty was accepted as one of the most solid of the virtues. Often the revenues of the college were insufficient to meet its needs, and money was saved by suppressing a course at meals, by going without fires and lights in some of the rooms, the library, or the staircases, or by making the old cassock last a little longer. Work in teaching was assiduous, so that even the most distinguished Sorbonistes published but little in comparison with the professors of other colleges. They were faithful to the vow of Robert de Sorbon to live only for their pupils.

The confusion which arose between the Faculty of Theology and the Sorbonne—a confusion which even led to such loose appellations as doctor of the Sorbonne instead of doctor of theology—arose mainly from two causes. The Faculty of Theology had the duty of supervising the publication of new books, and for a long time this duty was discharged by professors of the Sorbonne. Secondly, the Faculty of Theology was in the habit of attending at the hall of the Sorbonne for the purpose of hearing theses for licentiates in theology. The presentation of his thesis must have been an ordeal for the candidate: his examination, in the presence of theologians and strangers, lasted for twelve hours, during which time the judges replaced one another in laying traps for the unfortunate student. An additional cause of confusion, perhaps, came from the fact that up to the end of the ancient regime the Sorbonne maintained its autonomy. Its independence was such that in 1666 the college refused to open its doors to the rector of the University of Paris; and within its threshold even the powers of the King were limited.

At the present time the Sorbonne is the home in Paris of the Faculties of Science and of Literature, as well as of the École des Chartes, which is a school of history, but combines with that some of the functions of the Record Office in London. In the past and in the present, says Professor Dupont-Ferrier, the Sorbonne has worked for the great and good renown of France.

New South Wales.

HOSPITALS AND INJURED WORKERS.

THE Workers' Compensation Act, 1926, contained a provision whereby medical fees up to £50 are a charge on the employers, but the Act was so worded that the medical practitioner, unless directly employed by the employer, was unable to collect fees except from the injured worker. As a result the employer or insurance company, as the case might be, promptly ordered the injured worker to go to a public hospital for treatment, although they did not support the public hospitals financially. This naturally led to considerable irritation, both among medical practitioners and hospital authorities, who felt that the insurance companies were evading the provisions of the Act and were making unfair use of public charities. In March, 1927, an amending Act was passed, containing the following clauses:

1. The worker shall notify the employer without undue delay that he has obtained treatment, and the cost of such treatment to the employer shall be limited to £50 unless the Commission otherwise directs.

2. If the worker obtains medical treatment for himself the employer shall be entitled to have the worker examined by a medical man selected by the employer in consultation with the worker's medical attendant.

3. The treasurer of any public hospital or infirmary which is in part supported by grants from the public revenue or when the hospital or infirmary is wholly so supported any officer appointed by the Minister of Health may recover from the employer the cost of any hospital treatment provided for his injured worker in any case where the employer has been notified in the manner and within the time prescribed by the regulations of the fact that the worker has received or is receiving such treatment at the hospital.

An arrangement has now been arrived at between the majority of the companies undertaking insurance under the Workers' Compensation Act and the New South Wales Branch of the British Medical Association, whereby a schedule of fees will come into operation on the understanding that such accounts will be paid, and that the injured worker will be allowed to choose his own medical attendant. As regards fees to medical men attending public hospitals, an agreement was attempted, but the insurance companies take the attitude that as medical attendance at public hospitals is of an honorary nature they are under no obligation to pay such fees. It is understood that a test case will come before the Commission.

At a conference of representatives of the honorary staffs of the various large hospitals it was unanimously agreed that it would be contrary to the principle of honorary service that the members of the staffs should be called upon to treat gratis those cases in hospital for whom provision has been made for treatment outside, and a general understanding was arrived at that in such cases the members of the staffs should not give their services free. The boards of the various institutions were thus faced with the issue that, if treatment of these cases were persisted in, there was a possibility of the honorary staffs withdrawing from the institutions entirely, though no such threat was made or even suggested. The question has been dealt with by the boards of all the hospitals, who have agreed to a course of action similar to that adopted by the board of the Royal Prince Alfred Hospital as follows:

1. The interests of the medical staff, as submitted by the medical board and the joint meeting of the staffs of our own and other hospitals, involve a change of conditions in the hospital and possibly a complete change of system.
2. The financial situation of the hospital, which it was hoped would have benefited by the payment for treatment of large numbers of patients coming under the Act, is, on the contrary, suffering considerably from the fact that neither patients nor insuring bodies appear to be desirous of making adequate payment for the treatment given.

The following resolution was then passed:

> That the hospital, in its present form, was intended for the treatment only of the sick poor, who should, however, whenever possible, contribute towards the cost of their maintenance. The latter class of cases, who could not be regarded as indigent, should, in the opinion of the committee, be treated outside by private medical practitioners, or in private hospitals. The admission of such cases into the wards would have the effect of restricting the number of beds available for the sick poor, who should legitimately have a claim for admission. In any case the admission of patients able to pay for their treatment, whether out of their own means or through the receipt of funds coming to them from any special source—such as the operations of the Workers' Compensation Act—would be detrimental to the private interests of members of the honorary medical staff or other medical practitioners.

The board of directors, having the position clearly before them, endorsed the views of the committee, and it has consequently been decided that, for the future, only cases will be admitted to the hospital which, so far as it is known at the time of their admission, are not likely to come under the conditions of the Workers' Compensation Act. If, however, cases are admitted which upon investigation prove to come under the provisions of the Act, it has been directed that they are to be discharged as early as may be compatible with their medical condition, and a fee paid on their behalf during the time they are in the hospital, equal to a rate of 12s. a day, to cover the actual cost of maintenance. Further, a fee of £2 2s. is to be paid to the hospital on behalf of the honorary medical officer treating the case; this fee will be paid into a fund, the distribution of which will be decided by the members of the staff. In the case of casualties coming to the hospital first treatment will be given at once, but the patient will be informed—if any such case is obviously a Workers' Compensation case—that further treatment must be provided for outside the hospital, except in urgent and serious cases, which will be admitted to the wards of the hospital and charged full rates for hospital and medical expenses. Where it is possible a fee of 10s. 6d. is to be procured from the employer, to cover the cost of first-aid treatment afforded. This decision has now been brought into operation in the daily work of the hospital, and it is anticipated that the elimination of cases of the kind mentioned, and for which provision has been made by the Act, will permit of the hospital beds being occupied by what may be described as definitely hospital cases not coming under the terms of the Act. Unfortunately, however, only in isolated cases have these fees been paid, and the question of the steps to be taken to enforce payment for cases of serious accident or illness requiring treatment by the hospital is now being considered.

Dangerous Drugs Act.

The Police Offences Amendment (Drugs) Act, 1927, commonly referred to as the "Dangerous Drugs Act," regulates the manufacture, sale, possession, distribution, and supply of opium and certain other dangerous drugs. It applies to morphine, cocaine, ecgonine, and diamorphine (commonly known as heroin) and their respective salts, and opium, and any preparation, admixture, extract, or other substance containing not less than one-fifth per cent. of morphine or one-tenth per cent. of ecgonine, cocaine, or diamorphine. It does not apply to sixteen preparations enumerated in a schedule. Six of them are for external application; among the others are Dover's powder, aromatic chalk and opium powder, and a number of pills. One of the regulations authorizes medical practitioners registered under the Medical Practitioners Act, 1912 (N.S.W.), "to procure and be in possession of any" of the drugs in the schedule for professional purposes.

Royal Prince Alfred Hospital.

The annual report of the Royal Prince Alfred Hospital for the year ended June 30th, 1927, states that the total number of in-patients admitted was 9,005; of these, 3,453 were cases of accident or urgency, and did not pay, while 5,552 contributed something towards the cost of their maintenance. The average number of patients resident daily was 488; the number of individual patients attending out-patient and casualty departments was 52,764, and the attendances 140,818. The number of operations had greatly increased since 1893—it was then 1,171; in 1926-27 it was 8,689. The percentage the number of operations bore to the total admissions had also increased from 47.75 in 1893 to 96.49 in 1926-27. The total expenditure was £130,315, or nearly £17,000 more than the receipts. The sources of income were, public contributions £15,067; patients' contributions £19,986, Government subsidies £63,900, miscellaneous £13,512. The chief item under the last head was £5,300 visitors' passes. The Government contribution included payment of £2,000 under the head "venereal," and £400 under "anti-tuberculosis."

Intermediate Beds.

For a year or two past there has been considerable discussion as to the necessity for making hospital provision for what are known as "intermediate" cases—namely, patients who, while recorded as being financially unsuitable for treatment in the general wards of the hospital, are not sufficiently well off to be able to pay for medical treatment in a private hospital. This subject has been specially under discussion in Victoria, where it has been customary to refer to such cases as "intermediate" cases, and it is the intention of the Government in that State to legislate for the introduction of intermediate wards as part of the hospital system. The board of the Prince Alfred Hospital early in the year appointed a committee which, after investigating the system in force, especially in Great Britain, and with due regard to the American experience, prepared a lengthy report giving facts and information upon the whole subject. This was sent by the board of directors to the medical board, comprising the honorary medical staff of the hospital, for its opinion upon the whole subject. The medical board endorsed the proposal to introduce such a system as an adjunct to the hospital, and the means of providing such accommodation will now be considered. As was indicated in the report of the previous year, Dr. McEachern, who is the associate director of the

American College of Surgeons, while on a visit to the hospital recently, recommended the following basis for such a scheme:

(*a*) That there should be various grades of accommodation and charges.

(*b*) That the question of professional charges should be a matter between the doctor and his patient.

(*c*) That those who voluntarily enter paying wards of the hospital, and those who are deemed by an investigating official of the hospital to be able to pay professional fees in addition to maintenance, should make their own arrangements for attendance with the doctor of their choice, and should not be under the medical or surgical control of the resident medical staff.

(*d*) That private patients entering wards should not be attended by the stipendiary staff, but by the doctor of their choice. Failing such a choice being made, nothing should prevent a member of the honorary staff from attending the patient in a private capacity.

England and Wales.

KING EDWARD'S HOSPITAL FUND.

THE annual distribution meeting of the King Edward's Hospital Fund for London was held on December 13th, with the President, H.R.H. the Prince of Wales, in the chair, for the purpose of awarding grants to the hospitals and convalescent homes for the present year.

The Prince of Wales read a message from the King congratulating the Fund on increasing its distribution from £245,000 to £247,000, with the help of the League of Mercy, which was contributing £17,000 instead of £15,000. Commenting on the increase, the Prince expressed his gratification at this forward step by the League of Mercy, and his thanks to the British Charities Association for its donation of £15,000. One anonymous gift of £8,000 had been received during the year by the General Fund, legacies had increased by £10,000, and the income from investments had risen by £3,000. The capital fund continued to grow, the largest addition to the investments this year being Mr. H. W. Marshall's gift of £10,000 conversion stock. The total distribution for 1927 amounted to £281,500, including a sum of £34,500 from the legacies of the late Mr. and Mrs. Wells, which was being devoted to schemes of extension and improvement. These legacies had already helped to provide more than 1,300 additional beds, including 144 for accident cases. The Distribution Committee had been studying the problem of providing immediate medical attendance for accidents and other emergencies, and it was proposed that the conclusions reached should be published. The annual statistical report on the financial state of London hospitals had been issued. (Reference to this was made in our columns on November 5th.) During 1926 hospital expenditure had continued to expand with the increasing number of beds, while the income was slightly less; a small deficit had appeared, therefore, this year for the first time since 1922, chiefly due to a falling off in legacies. Contributions from patients had continued to grow, and were being received at the rate of £220,000 a year. The Prince referred to the Pay Beds Committee of the Fund, which was inquiring into the question of hospital accommodation for people with incomes above the ordinary, and also to the pensions scheme for nurses and hospital officers, which would begin on January 1st, with eighty-nine London hospitals, representing more than 12,000 beds.

Lord Revelstoke, honorary treasurer, stated that, contrary to anticipation, it had not been necessary to make use of the whole of the £9,000 added to the reserves in 1925. In consequence of some unexpected contributions the withdrawals had been limited to about half this amount. With regard to the Wells legacies, £214,240 had been received so far on account, and it was believed that these legacies would amount eventually to more than £240,000; Lord Iveagh had bequeathed £60,000. Sir William Collins stated that since 1899, when the League of Mercy was established, it had distributed to voluntary hospitals £515,731, of which £415,034 had been given to the King's Fund. The increased grant this year was rendered possible by the generosity of subscribers.

Lord Somerleyton, honorary secretary, presented a schedule containing a list of awards to hospitals, including recovery and convalescence branches. Among the larger grants were:

The London Hospital, £16,150; Guy's Hospital, £11,500; St. Thomas's Hospital, £11,000; Royal Northern Hospital, £9,700; Middlesex Hospital, £8,825; St. George's Hospital, £7,900; King's College Hospital, £7,500; St. Mary's Hospital, £6,750; Royal Free Hospital, £6,500; St. Bartholomew's Hospital, £6,000; West London Hospital, £5,750; Prince of Wales's General Hospital, £5,600; Charing Cross Hospital, £5,500; Queen Mary's Hospital for the East End, £5,200; Metropolitan Hospital, £5,000; Westminster Hospital, £5,000; Miller General Hospital, £4,575; Royal National Orthopaedic Hospital, £4,500; and the Queen's Hospital for Children, £4,050.

DURHAM UNIVERSITY MEDICAL SOCIETY.

The annual dinner of the Durham University Medical Society was held at Newcastle in the University Union on December 15th, with Mr. Harvey Evers, president, in the chair. The chairman, in proposing the toast of "Our Guests," made special reference to Professor Thomas Beattie and Sir Thomas Oliver, whose names were received with acclamation. He said that it was a great shock to them to know that Professor Beattie was retiring from the staff of the Infirmary. Professor Beattie had been born, bred, and educated in the city, of which his father was at one time mayor. The loss was very great to them, though they had the pleasure of knowing that he was remaining awhile as consulting physician. It was also a great satisfaction to know that his services would not be lost to the University. Professor Beattie, in acknowledging, said that his severance from the Infirmary was due to the fact that the calendar told him he was older than he felt. Though giving up his clinical activities, he hoped to teach for some years to come. His association wth the Infirmary had been continuous since 1886, while his connexion with the society commenced in 1888, when he was its secretary and afterwards president. Sir Thomas Oliver, in proposing the toast of "The Medical Society," said that medical men of the present generation had fuller opportunities for participating in public life than heretofore, and their services would be of great practical value in Parliament. Mr. T. A. Hindmarsh expressed the indebtedness of the members of the society for the heavy labours of the president and secretary on their behalf.

MANCHESTER: TRIBUTE TO DR. MCGOWAN.

On December 16th a large company of Manchester medical men and women met at the Grand Hotel at a dinner in honour of Dr. R. G. McGowan, who retires this month from the secretaryship of the Manchester Medical and Panel Committee, which he has held since the inception of the Insurance Act. Dr. Skinner, the doyen of medical men in practice in Manchester, took the chair, and was supported by Mr. A. H. Burgess, Dr. Dain, chairman of the Insurance Acts Committee, Dr. Frank Radcliffe, representing the Lancashire panel practitioners, and Dr. G. C. Anderson, Deputy Medical Secretary, in the absence, owing to recent bereavement, of Dr. Cox. Mr. Walter Davies, J.P., the first and only chairman of the Manchester Insurance Committee, was the one layman present. The toast of the evening was proposed by Dr. T. A. Goodfellow, who recounted some of the doings of Dr. McGowan as secretary, representative of panel practitioners on the Manchester Insurance Committee, as adviser in cases before the Medical Service Subcommittee, as member of the Insurance Acts Committee, and as sage counsellor and friend of all in time of doubt and difficulty; and presented to him on behalf of the practitioners of Manchester a gold cigarette case suitably inscribed, containing a cheque for £1,000, together with a platinum and pearl necklet for Mrs. McGowan. The presentation led to a scene of enthusiasm, showing conclusively the admiration and esteem of his colleagues. Dr. McGowan's response was very brief and lacked much of the incisiveness and vigour usual in his public speeches, to the amusement of many with whom he had dealt faithfully in times gone by. The toast of the guests was proposed by Dr. Coulthard, whose speech at the Edinburgh dinner will be remembered by many, and was responded to by Drs. Dain, Radcliffe, and Anderson. As Mr. Walter Davies had to leave to catch a train, Dr. Edmund Johnstone responded on his behalf.

A Blood Transfusion Service in London.

The British Red Cross Society has recently published a special report of the blood transfusion service, which has been carried on under its auspices since 1925. The foundations of the present service were laid in 1921 when a request was received by the Camberwell Division of the British Red Cross Society for a blood donor for a case of emergency, and four members volunteered. Mr. P. L. Olivier, honorary secretary of the division, collected about twenty volunteers for subsequent occasions, and has maintained the necessary organization since then. In 1922 thirteen transfusions were given, in 1923 twelve, and in 1924 the number increased to sixty-two. An appeal for volunteers was made to the general public, and thirty responses were received, one from a rover scout who interested his organization in the work. In 1925 a total of 389 transfusions were supplied, of which 277 were given by rover scouts. In 1926 477 were supplied by rover scouts and 159 by members of other organizations. At the present time the number of donors enrolled is approximately 450, about sixty of whom are women. After each transfusion the hospital supplies clinical information as to the results, and this is duly recorded. Medical practitioners may obtain full information from the secretary, Mr. P. L. Olivier, 210, Peckham Rye, East Dulwich, S.E.22. The report gives a list of the sixty-eight institutions from which applications were received during 1926. The Blood Transfusion Service has been financially self-supporting from the start. The bulk of the income is derived from donations, the sale of tinfoil collections, and from the organization of entertainments. The British Red Cross Society hopes to form similar services all over the country.

Ireland.

Ulster Medical Society Annual Dinner.

The annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on December 15th. The president, Dr. J. C. Rankin (Belfast), occupied the chair, and a company of about 130 was present. After dinner the toast of "The King" was duly honoured, and the president then gave the toast of "Prosperity to Northern Ireland," which was responded to by the Right Hon. E. M. Archdale, Minister for Agriculture for Northern Ireland. "The Royal Colleges of Ireland" was proposed by Mr. S. T. Irwin, F.R.C.S.Ed. (Belfast), and responded to by Dr. W. A. Winter (Dublin), President of the Royal College of Physicians of Ireland, and by Mr. A. Fullerton (Belfast), President of the Royal College of Surgeons in Ireland. The health of the guests was proposed by Professor C. G. Lowry, and responded to by Mr. John McGonigal, K.C., and by Mr. D. Wilson Smyth. The president's health was proposed by Dr. Foster Coates (Belfast) and responded to by Dr. Rankin, who asked the company to join him in drinking the health of their honorary secretary, Dr. Maitland Beath, on whom so much of the hard work had fallen.

Notification of Infectious Diseases.

In a letter to each sanitary authority in the Free State the Minister for Local Government and Public Health states he has had under consideration the adequacy of compliance with the requirements of the Infectious Disease (Notification) Act, 1889, and he has formed the opinion, as a result of correlating the registered deaths with the statistics of the known incidence of the graver epidemic diseases (enteric fever, diphtheria, and scarlet fever), that the duty of notification is insufficiently observed. Furthermore, a comparison between the records for urban and rural districts goes to show that the deficiency of notification is more clearly marked in the latter areas. In the circumstances the Minister desires to impress on sanitary authorities the importance of a strict enforcement of the notification system. Attention is directed to the circular letter of May 29th, 1925, intimating that uniform application throughout the Irish Free State (Saorstat Eireann) was given by the Local Government Act of that year to the obligation to notify infectious diseases—namely, small-pox, cholera, diphtheria, membranous croup, erysipelas, scarlatina or scarlet fever, and the fevers known as typhus, typhoid, enteric, relapsing, continued, or puerperal. It should be realized that notification is not only essential for the protection of the public in facilitating disinfection and other precautionary measures, but in the interests of the individual patient enables the medical officer of health to assist in arranging for suitable institutional accommodation and nursing attendance where necessary. It is suggested that general notice of the duty of notification and of the liability to penalty in case of default should be given by the sanitary authority to members of the medical profession and to the public at large by advertisement in the local press and such other means as may be considered advisable. It may also be explained that upon the appointment of a county medical officer of health he becomes entitled to receive notification of infectious diseases in substitution for the dispensary medical officer (Article 9 (7) of the County Medical Officers of Health Order, 1926), and it will devolve upon him from time to time to undertake a critical survey of the practical working of the notification system in the county for which he acts.

Organization of the Co. Fermanagh Division.

A very successful meeting of the members of the Enniskillen or Co. Fermangh Division of the British Medical Association was held in Enniskillen on December 15th. Many of the members who attended had only just joined, and their recruitment was entirely due to the efforts of Dr. Leonard Kidd, who entertained the company at dinner at the Imperial Hotel, Enniskillen. The Irish Medical Secretary (Dr. T. Hennessy) was present, and gave an account of the aims of the British Medical Association and what it had done for the profession in Ireland. A vote of condolence was passed to Dr. Alfred Cox, Medical Secretary, on his recent bereavement.

Scotland.

Registration of Maternity Hospitals and Homes.

The Scottish Board of Health has issued to local authorities in Scotland regulations dated November 24th, 1927, prescribing the necessary forms for compliance with Part II of the Midwives and Maternity Homes (Scotland) Act, 1927. Under the Act and Regulations every maternity hospital and home will require to be registered by the local supervising authority of the area in which it is situated, and will receive a certificate of registration as from January 1st, 1928. The Regulations prescribe the particulars which must be entered in the registers to be kept in such maternity hospitals and homes. Copies of these may be obtained from H.M. Stationery Office, price 2d. The general regulations connected with registration were outlined in our columns on November 5th (p. 847). The points which have to be entered in the registers to be kept by the homes are: the names of medical practitioners attending the patients or infant children in the home; the names of other persons attending on these; the names of each patient and of the infant children of such patients, and the names of all children born in the home who are removed from the home to the custody of other persons than the parents, guardians or relatives. The last part is known as the "removal register." Case records must also be kept showing a daily statement of the health of the patients and children, and also a record of the amount of payments made to the keeper of the home by, or in respect of, patients. Notice of deaths at the maternity home must also be sent to the local supervising authority within twenty-four hours of their occurrence. The form which the various registers are to take is given in the Regulations.

Measles in Glasgow.

A bulletin issued by the public health authorities of the city of Glasgow shows that at the present time there are 2,560 notified cases of measles in that city as compared with 65 at the corresponding period last year. The incidence

of the disease is spreading at the rate of about 800 or 900 cases each week. Although the distribution of cases is fairly general, the eastern, south-eastern, and northern parts of the city are chiefly affected. Diphtheria shows 386 cases, as compared with 232 cases at the corresponding period last year.

EXTENSION OF EDINBURGH WOMEN'S HOSPITAL.

An extension of the Hospital for Diseases of Women, at 2, 4, and 8, Archibald Place, Edinburgh, was opened on December 16th by the Duchess of Buccleuch. Mr. T. L. Usher presided, and explained that the hospital had been opened in 1910 at No. 2, Archibald Place, a house used by the late Dr. Haultain as a private gynaecological home, and this had been bequeathed by him for the purposes of the hospital. The hospital had opened with fifteen beds. In 1912 the house at No. 8 was added, and used for the accommodation of the nursing staff, and in 1926 the house at No. 4 had been purchased, thus increasing the accommodation of the hospital to thirty-three beds. The patients paid a proportion of their maintenance, and in this way the home differed from a teaching hospital, where patients could go for nothing. Over 7,000 women had been treated and 1,600 major operations had been performed since the hospital began seventeen years ago.

Correspondence.

MEMORIAL TO THE LATE PROFESSOR FRANCIS MITCHELL CAIRD.

SIR,—A number of the friends of the late Mr. Francis Mitchell Caird, a former lecturer on surgery in the Extra-Mural School and professor of clinical surgery in the University of Edinburgh, having expressed a desire to perpetuate his memory in the Edinburgh Medical School, a committee was appointed by the Medical Faculty of the University and the Council of the Royal College of Surgeons to consider what steps should be taken for this purpose.

The committee and the two bodies which it represented decided that the memorial should include a prize and medal open for competition to graduates of the University and Licentiates and Fellows of the Royal College of Surgeons of Edinburgh who have studied for two years in Edinburgh and have been qualified as practitioners for not more than seven years. The prize, offered biennially, will be awarded for the best essay in surgery or surgical pathology based on personal observation and research, the subject being chosen by the candidate.

Subscriptions of one guinea and upwards will be gratefully received. Those who have not been approached directly by the committee and are desirous of subscribing are invited to send their subscriptions by cheque or postal order, payable to the Francis Mitchell Caird Memorial Fund, per the accountant of the University and addressed to him at the University of Edinburgh, Old College, Edinburgh.—We are, etc.,

ALEXANDER MILES,
President, Royal College of Surgeons of Edinburgh.
J. LORRAIN SMITH,
Dean of the Medical Faculty, University of Edinburgh.

Edinburgh, Dec. 16th.

TREATMENT OF PROSTATIC ENLARGEMENT.

SIR,—I think it well to take exception to one (if not more) of the provocative statements made by Sir Cuthbert Wallace in the interesting Bradshaw Lecture published in the BRITISH MEDICAL JOURNAL of November 19th (p. 907). It is this that he says: "I am unaware, however, that a man has ever begotten a child after a prostatectomy."

Now patients who have undergone prostatectomy done by myself according to a method described in the BRITISH MEDICAL JOURNAL of October 3rd, 1908, with illustrations, and in 1909,[1] have begotten children. I well remember being startled by one of these patients during an evening visit to my private hospital, when he said, "I am afraid something is going wrong with me; I had a wet dream this afternoon, a thing I have not had for nearly forty years." I administered a psycho-analyst's mixture with good effect. The question of paternity will, no doubt, be raised, but in one of my cases it can be solved by anthropological study of the offspring's features.

I had another patient (aged 60) who returned six months after operation to seek my advice about "nocturnal emissions" which worried him, because he had had no sexual desire for at least three years before operation. He promptly recovered after a mixture of heart-to-heart talk like unto the above.

I met this year another old patient who is very proud of his second family from his third marriage.

I gave up private practice in July, 1914, but these cases have left fairly definite impressions about the relative merits of the two routes for attacking prostates. They may be worth relating as a contribution to the present controversy about the advice it is wisest to give.

I believe the safest course in most cases is to do this operation in two stages—that is, to do a preliminary suprapubic cystotomy, and let the patient get up as soon as he feels inclined to; then, when all is apparently going on well, to do the next and last stage by the combined suprapubic (already done) and perineal method referred to above.

Suprapubic cystotomy takes a short time to perform, and I agree with Sir Thomas Carey Evans's views[2] on the assessable value of time in determining the rate of mortality after prostatectomy. Only this year, when visiting, with other members of the Chirurgical Club, a capital city in Europe, I happened to remark to a very distinguished foreign surgeon, while looking on at a suprapubic cystotomy being performed under a local anaesthetic, that I had never seen perfect local anaesthesia; the unexpected reply came, "You are quite right; I had the first stage of my prostatectomy done that way and I suffered lots of pain." He told me he was then wearing a urinal. The next day I saw him do several abdominal operations in brilliant style; the second stage of his prostatectomy was going to be done after we left the capital for home; the delay was, I thought, sound.

The second stage of my operation, mentioned above, can be done in less time than any other method of prostatectomy finished at one sitting, because the perineal opening in the second stage can be made within one minute and the prostate is enucleated by the forefingers of both hands working simultaneously. Before enucleation is started I always filled the bladder with tincture of iodine so as to have a reliable antiseptic in contact with the new raw surfaces being formed.

It seems to me that success on the road to abolition of mortality will be found in the following factors, amongst others: (*a*) Preliminary psychic treatment of assurance to the patient that he need not stop in bed, but can get up whenever he likes after operation. The dread of being bedridden is to old people a bogy to be exorcised. (*b*) Assurance that each stage of operation only takes a few minutes, and not hours or a big portion of one. (*c*) The operation to be performed in and through a harmless but effective antiseptic—for example, tincture of iodine or 2 per cent. mercurochrome.—I am, etc.,

JOHN LYNN-THOMAS.

Llechryd, Cardiganshire, Dec. 13th.

SIR,—With reference to the statement that in the London hospitals a mortality of 40 per cent. from the operation of prostatectomy has been experienced over a period of years, I think it is worth while to record that this mortality does not represent the average mortality throughout the country for this operation.

Taking my own private and hospital cases all together, I have performed the suprapubic prostatectomy operation on thirty consecutive occasions with one death—a mortality of a fraction over 3 per cent. This includes several operations on malignant prostate.

It is evident that the mortality for selected cases must be very different from the mortality where many unfavourable cases are included, and, of course, the subjects

[1] Nouvelle méthode de prostactomie, 22nd Congrès de l'Association Française de Chirurgie.

[2] BRITISH MEDICAL JOURNAL, December 10th, p. 1114.

for operation in a country area are undoubtedly more favourable in constitution than those in a town area. At the same time, although these figures refer to a comparatively small number of cases, I think they dispose of Sir T. Carey Evans's contention that prostatectomy is an operation only to be performed by genito-urinary experts.—I am, etc.,

Old Colwyn, Dec. 12th. A. NORMAN LEEMING.

SIR,—In your issue of December 10th (p. 1114) Sir T. Carey Evans alludes to the high mortality of suprapubic prostatectomy, for which he is inclined to hold the general surgeon responsible. Thus, "so long as it is claimed that this operation is part of general surgery the mortality rate will remain where it is."

This is a formidable indictment, based on a study of statistics from some general hospitals. Now the statistical approach to a surgical problem has its pitfalls. It is even possible to take too seriously some series of statistics. For Sir T. Carey Evans the operation of prostatectomy is a "special" one, beyond the compass of the average general surgeon—and I write as one. It demands, we are told in his letter, a "particular knack or gift," and this useful talent is the exclusive possession of the genito-urinary specialist. In his zeal for specialism I am afraid he has unduly stressed the difficulties of this operation. He will find little support for his argument in the address of the distinguished Bradshaw lecturer in November last, who said "removal of the adenomata is not a matter of delicate and difficult dissection, but really consists in entering a line of cleavage already established and following it to its end. It matters little whether this is done under the eye or not."

So much then for the technique of the operation, which, after all, it is only necessary to learn. A note is added on Freyer's pace in operating, his dramatic mannerisms, and low rate of mortality in a long series of cases. A fair inference would be that the bulk of them were adenomata, capable of rapid enucleation by a dexterous surgeon. There cannot have been many examples of the small fibrous prostate in the series, and reference to the case records in Freyer's book bears this out.

Several other points of interest arise in the letter. Operation by the open method is preferred to so-called "blind" prostatectomy. There are those who hold that either has its particular sphere of usefulness. For the simple adenomatous enlargement of the gland operation by the method popularized by Freyer has been found to suffice and has given good results in many hands. It is far otherwise in the small fibrous adherent type of gland with little or no intravesical projection. Here it is often hazardous to attempt enucleation, and only by wide exposure of the bladder base and dissection under vision can removal be accomplished with safety. In every respect I have found this open operation a more severe procedure than enucleation, and reserve its employment for the cases of the fibrous type already referred to.

On the subject of after-treatment importance is attached to thorough irrigation as a means of maintaining the prostatic cavity clean. Unless the tube became blocked by clots I have always been averse to doing this; for I have found that irrigation tends to prolong oozing, especially during the first few days after operation. Instead, I have packed the cavity tightly with iodoform gauze, a method which I learned from E. S. Judd at the Mayo Clinic. The gauze serves a dual purpose. It promotes haemostasis, and prevents stagnation of urine in the prostatic cavity. My practice is to loosen it up a little on the third day after operation, and withdraw it entirely on the fourth, when the tube is replaced.—I am, etc.,

Ashton-under-Lyne, Dec. 12th. GERALD RALPHS.

THERAPEUTIC ABORTION.

SIR,—The subject of therapeutic abortion, ably discussed recently by Dr. Dalton in your correspondence columns, is one in which the honour and repute of the profession are deeply concerned. Dr. Binnie Dunlop's definition of the term as "abortion performed by a medical practitioner on purely medical—that is, pathological—grounds" evades the point at issue. We need a detailed statement, acceptable to the majority of the medical profession, of what the words "pathological grounds" cover.

Dr. Binnie Dunlop's interpretation of them seems to be exceptionally wide. In the discussion on abortion in the Section of Obstetrics at the British Medical Association's Annual Meeting in 1926 the abstract of his speech contains the following sentence: "He considered it an indication of the desirability of this [that is, of terminating a pregnancy before the viability of the child] merely if the woman wished it, or rather if the woman could not be persuaded to desire the pregnancy to go on"! (BRITISH MEDICAL JOURNAL, vol. ii, 1926, p. 247.) In opening this discussion Dr. Eden mentions the barrister's wife on whom he, after consultation with Dr. Herman, induced abortion merely because she objected to having a third baby shortly after the birth of a second. He also states that a consulting obstetrician procured an abortion for the same woman in her fourth pregnancy, and for the same reason. Later he gives details of a case in which he induced abortion because the woman was in a pitiable state of fear about the possibility of her death if the pregnancy (her third) went to full term.

In view of these openly expressed opinions by leading obstetricians I will state a case of common occurrence and ask a question.

An unmarried woman, pregnant for the first time, consults a struggling medical practitioner in one of the poorer quarters of London. She tells him she is in a deadly state of fear if her pregnancy is allowed to go to full term. She feels she cannot face the anguish of the months that will elapse before her confinement, nor the subsequent loss of employment and disgrace. If the doctor will not end her pregnancy she will try to do it herself, and if she fails she feels she will go mad or she will commit suicide.

Now, in this case, is it the opinion of the majority of the medical profession that the doctor ought to induce abortion? If the answer is Yes, then we as a profession are allowing, without protest, certain of our members to be criminally prosecuted and to be removed from the *Register* because they carry out a procedure which we consider correct and morally justified. If the answer is No, then as a profession we are condoning a similar procedure if carried out by consulting obstetricians on wealthy and married patients. On which horn of the dilemma shall we impale ourselves?—I am, etc.,

London, W.6, Dec. 11th. C. THACKRAY PARSONS.

THE ABUSE OF CAESAREAN SECTION.

SIR,—Dr. Jellett was kind enough to refer to some statistics I had collected during a recent visit to America as a guest of the Rockefeller Foundation. Unfortunately it appears that America is not the only country where Caesarean section is popular. The abuse of Caesarean section may be classified under at least five headings.

1. *As a method of treating eclampsia.* In the year 1835 Dr. Collins, as a result of his experience as Master of the Rotunda Hospital, wrote as follows: "I would strongly caution junior practitioners to avoid hasty measures for the delivery of the child, which perhaps alarm for the mother's safety might induce them to have recourse to." Although times have changed, those words are as true now as on the day they were written. Incidentally I may add that Dr. Collins's mortality rate for eclampsia was 16.6 per cent.

2. *Placenta praevia.* Holmes of Chicago gives the maternal and foetal mortality in placenta praevia treated by Caesarean section as "20 per cent. and 36 per cent. respectively," while obstetrical treatment "gave a mortality of 7 per cent. and 55 per cent. respectively." Thus, according to him, "Caesarean section saved one baby for every mother who was killed by the procedure."

3. *As a refuge for inexperience.* Williams of Baltimore believes that in many places the mere diagnosis of contracted pelvis is regarded as an indication for Caesarean section, irrespective of the fact that 75 to 80 per cent. of cases of contracted pelvis will deliver themselves spontaneously if allowed to do so. In the Montreal Maternity

Hospital during the year 1923 there were 52 cases of contracted pelvis, but only 11 of these patients were delivered by Caesarean section.

4. Its frequent performance is believed to add to the reputation of the operator (Williams).

5. Its mortality rate is considered trifling. The average mortality rate for this operation throughout the United States of America is believed to approach 10 per cent. (Williams).

While passing no comment on the remedies that have been suggested, I beg to submit that a thorough ventilation of the limitations and the dangers of this operation may tend to make some practitioners less proud of the number of times they have performed it.—I am, etc.,

Hong-Kong, Nov. 5th. R. E. TOTTENHAM.

SUSCEPTIBILITY TO INFECTION DURING PREGNANCY.

SIR,—I would through your columns thank Dr. C. E. Douglas for the booklet (containing much valuable and stimulating matter) which he has just sent to the doctors of Fife, but there is one paragraph with which I cannot agree—namely: "We have in the pregnant woman a subject in which the immunity from disease and particularly from sepsis is not increased but diminished." I am sure Dr. Douglas will agree that before accepting a deduction we must be sure of our premisses, and that the deduction logically follows therefrom.

"A woman suffering from tuberculosis becomes pregnant. She remains well till her confinement." I quote Dr. Douglas. This, in my opinion, is the premiss, and not what happens after parturition. Dr. Douglas might have gone much further, and said that during pregnancy many tuberculous women very greatly improve. I have, for example, seen a tuberculous abscess completely dry up during pregnancy, and in a month or two afterwards again become active.

My reason for writing is that I, too, have given much thought to this subject, my premiss being that there is in the pregnant woman's blood something which is antagonistic, certainly to tuberculosis, and probably to all microbic disease, and my deduction is, if we could find what this endocrine (for I presume it is such) is, we would be on the way to the discovery of a cure for tuberculosis. I have tried corpus luteum and thyroid, but without marked results; still, I am convinced that if the right substance could be found the results would be as I have stated. The pregnant woman's reaction to specific fevers bears out my contention. I agree that the parturient woman soon loses this immunity from disease, and may even reach a stage of less resistance than normal, but this does not affect the argument.—I am, etc.,

Thornton, Fife, Dec. 6th. A. TAIT.

CATARACT AND ULTRA-VIOLET LIGHT.

SIR,—Whilst flattered by Mr. Duke-Elder's interest in my letter published in your issue of December 3rd, I feel that some of the conclusions he draws in his communication published in your issue of December 10th (p. 1114) are unacceptable—at any rate, by me.

Experiments on animals, especially on the excised eye of a rabbit suspended in normal physiological saline (which appears to be the only experiment Mr. Duke-Elder has made upon the eye with ultra-violet *alone*), are not conclusive evidence that small, therapeutic doses of ultra-violet, in combination with other luminous and infra-red wave-lengths, are capable of producing cataract in the human subject. If so, may I ask him why he has advocated and practised ultra-violet radiation in the treatment of other diseases of the eye, both superficial and deep? Is he not afraid that, whilst he admittedly is curing these other inflammatory and infective disorders, he is not producing cataract? I feel quite assured that he has well satisfied himself upon this point.

Both he and Mr. Bishop Harman agree that ultra-violet light, in combination with strong luminous light, is capable of producing an intense conjunctivitis. Yet at least one of them would use ultra-violet in the treatment of the more chronic forms of inflammatory diseases of the eye.

I can assure him that I have read with great interest and profit his articles in the *Lancet* on the pathological action of light upon the eye. In these articles he himself admits, and quotes an overwhelming mass of evidence to the effect, that luminous light and heat rays are well known to be causes of cataract. He states that "under experimental conditions opacity is difficult to obtain, owing to the difficulty of getting a sufficient amount of short-waved irradiation through the anterior eye. Further, the lens proteins appear to be more stable under these radiations than most others. Several observers have therefore reported negative results." In his letter he states that "cataract is a coagulation of the proteins of the lens; and proteins are coagulated by ultra-violet radiation." I agree—so are proteins coagulated, and *much more readily*, by heat. The chemistry of proteins covers an immense amount of literature, and is still far from complete.

What I suggest ultra-violet light may do, in therapeutic doses, is to arrest the pathological processes whereby normal proteins of the lens are being slowly converted into opaque coagulated material, and further permit Nature to remove some of the deposits via the lymph channels. If Mr. Duke-Elder will read my original letter again he will see that nowhere do I suggest that radiation of any kind will "cure" cataract. When I wrote my first letter it was to prevent those who might read Mr. Bishop Harman's first communication being persuaded that ultra-violet light exerted a harmful effect in all conditions of the eye, and might, indeed, cause cataract.

I do not know whether the sting in the tail of Mr. Duke-Elder's letter is especially intended for me. I would like to remind him, however, that but for enthusiasm and perseverance on the part of clinicians there would be no such things as "ascertained experimental data." Practically all the advances and discoveries in the history of medicine owe their inception to the enthusiasm and accurate powers of observation of practising clinicians, rather than to those who work in laboratories.

Nearly twenty years of constant practice in general medicine have not left me unable to make accurate observations, or liable to fail "to assess the complicated systemic influences which from time to time may alter the refractive properties of an unstable lens."

I have reported elsewhere two cases of cataract which I personally treated. Both had been under the care of ophthalmic surgeons of repute.

In one case, after some two months' treatment with actino-therapy, the ophthalmic surgeon reported to me as follows: "There is no doubt that the vision has improved, as shown by the following: R.V. before was 6/12, now 6/9; L.V. before 6/9, now 6/6; and she herself thinks she is certainly better. Ophthalmic examination also shows some change which seems to me to be a thinning of the lens striae, so that the clearer intervals between them are wider."

In the other case, after twelve exposures spread over twelve months, the patient—who had not been able to read the printed page for seven years, nor to distinguish faces—was able to read Pica 10 (Jaeger) with ease, and to write letters in the train, as well as to walk about the streets unaccompanied. This lady still has her cataracts, but she has also got vastly improved vision.

There are possibly other cataract patients who might gain a like benefit. Certainly removal of the lens is not a "cure" for cataract, any more than amputation of the limb is a cure for an ankylosed knee-joint.—I am etc.,

London, W., Dec. 10th. PERCY HALL.

SIR,—It may interest some of your readers to hear that I had a patient with a slowly maturing cataract who had been to me for some years. A year ago he left me for some unqualified person's light treatment. I was somewhat surprised when he was led into my room by his son a short time ago. His vision was reduced to perception and projection of light only, in both eyes. He told me where he had been, and that it had cost him a hundred guineas, and asked me to operate on him, which I did. He sees perfectly again, after refusing to stay longer in the home than a week.

Years ago Colonel H. Herbert, now of Hove, told me that in his opinion (he did some 20,000 lens extractions in India) cataract there was caused by the intense light, possibly combined with malnutrition in the case of the native population.—I am, etc.,

London, W., Dec. 19th. SYDNEY TIBBLES.

DIET AND PYORRHOEA.

SIR,—For the past few years I have been firmly convinced that diet is a most important factor in the causation of both dental caries and pyorrhoea, and have advised my patients accordingly, with varying results, depending on which the patients considered of greater value, "the pleasures of the table" or their teeth.

On January 20th, 1927, Mr. X was referred to me by his medical adviser, with the object of having several of his teeth extracted on account of pyorrhoea. He suffered from the typical so-called pyorrhoea, with marked gingivitis and pus exuding, on pressure, from several points; salivary calculus was present in abundance on the lingual surfaces of the lower incisors and on the buccal surfaces of the upper molar teeth, and halitosis was very marked. In the upper jaw were three teeth with ill fitting gold crowns. *X*-ray examination revealed general absorption of the alveolar margins, but no apical infection. I removed the gold crowns, reamed the pulp chambers, inserted creosote dressings, and sealed with temporary cement, being unwilling to proceed with the recrowning until I felt assured that the condition was responding satisfactorily to treatment. At the same time I performed thorough prophylaxis and instructed the patient in the proper care and hygiene of the mouth, including the use of a mouth wash composed of lemon juice and water.

I reported the results of my examination to his doctor, at the same time telling him that I thought it would be possible to save all the teeth if the patient could be persuaded to adopt a diet I should schedule for him. The doctor readily agreed to this, and gave me whole-hearted support, which was of great assistance in tiding the patient over the difficult period that must elapse before any result could be seen or felt. The patient rather grudgingly agreed to give the treatment a trial for six months.

I prescribed a diet which contained a large proportion of fresh raw fruit and vegetables, and of which the salient features were three meals daily—one fresh fruit, one carbohydrate, and one protein. The fresh fruit was eaten, absolutely alone, for breakfast, the carbohydrate meal consisted of any kind of coarse grained bread with plenty of butter, followed by a large raw vegetable salad, and the protein meal consisted of a small portion of meat (to be taken not oftener than twice a week), or eggs or fish or cheese or fowl, etc., always accompanied by two of the less starchy vegetables, properly (that is, conservatively) cooked, and followed, as in the carbohydrate meal, by a large raw vegetable salad. I also allowed him when he so desired to partake of a purely vegetable soup (neither bones nor meat of any kind to be used in its preparation), or stewed dried fruit. The carbohydrate and protein meals were to be taken, one at mid-day and the other in the evening, in whichever order the patient preferred. No condiments of any description were to be consumed.

The patient has reported at intervals since his first visit, and an improvement has always been manifest. On November 14th, 1927, examination of his mouth revealed teeth firmly implanted in sockets, absence of pus pockets, no halitosis, no salivary calculus, and only the slightest trace of gingivitis, which, I am confident, will disappear after a further period of treatment. The patient himself said that the rheumatism, from which he had long suffered, was quite gone and that constipation was much less marked. In appearance he looks much more virile, his skin is clean and healthy, and he declared, voluntarily, that his diet suited him admirably, and that he would never think of returning to the old regime.

This result confirms what Howe, McCollum, Simmonds, and others have been teaching—namely, that pyorrhoea is merely a symptom of a general poisoning of the body brought about by a wrong diet.—I am, etc.,

J. MENZIES CAMPBELL,
Glasgow, W.2, Nov. 23rd. L.D.S., D.D.S., F.R.S.Ed.

TUBERCULOUS LESIONS FOLLOWING INJECTION OF PITUITARY EXTRACT.

SIR,—Would it not be as well to bear in mind the possibility that the cases noted by Messrs. Donaldson and Lane-Roberts were due, not to fresh infection by tubercle bacilli in the pituitary extract, but to stirring up of an existing tuberculous focus in the patient, either by the injection or by the disease for which it was given?

In our urban population most people are infected with tubercle, though only a small proportion of these suffer from it, and the breakdown is nearly always due to quite other causes than the infection. That disturbance of endocrine balance is concerned is extremely probable, though the connecting metabolic links between different accepted causes of tuberculosis have not yet been clearly traced.—I am, etc.,

Farnham, Dec. 19th. F. R. WALTERS.

THE BIPP METHOD.

SIR,—With reference to the remarks of Professor Rutherford Morison in your issue of December 10th (p. 1077) on the "bipp method" of treating infected wounds, I think that one reason why this invaluable method is not more widely used is that many of the leading chemists sell under the name "bipp" an ointment with a base of soft paraffin (paraffinum molle) instead of the liquid paraffin. Such a preparation will not form a film on the surface of a wound, and is therefore perfectly useless for the purpose intended.—I am, etc.,

A. G. COULLIE, M.D., F.R.C.S.Ed.,
Cheadle, Staffs, Dec. 15th. Lieut.-Colonel, I.M.S.(ret.).

CONVEYANCE OF MILK.

SIR,—From your interesting note on the conveyance by rail of London's milk supply in glass-lined tanks (BRITISH MEDICAL JOURNAL, December 10th, p. 1102) it is not clear what precautions are taken to prevent contamination of the milk by mud and refuse from the churns when these are emptied into the trough which leads to the coolers. I learn that in Denmark care is taken to avoid such contamination by not turning the churns upside down in emptying them, and by rejecting the bottom layer of milk in which the grosser impurities accumulate. Moreover, it is said that the milk is centrifugalized in order to remove muddy deposit. Perhaps the United Dairies Company would state whether any such methods are used in their process, or whether reliance is placed on sterilizing the mud by pasteurization.—I am, etc.,

December 12th. Γάλα.

Universities and Colleges.

UNIVERSITY OF WALES.

Honorary Degrees.

AT the last meeting of the Court of the University of Wales, held at Colwyn Bay, it was decided to confer the honorary degree of LL.D. upon Sir Thomas Lewis, F.R.S., for his distinguished scientific work in medicine, particularly in cardiology; upon Sir Robert Philip, President of the British Medical Association, for his distinguished services to the science and profession of medicine; and upon Dr. H. B. Brackenbury, Chairman of Council of the British Medical Association, for his distinguished services to the profession of medicine.

The acting Pro-Chancellor explained that the list of recipients of honorary degrees might not yet be complete, since, in view of the British Medical Association holding its Annual Meeting in Cardiff next July, it was contemplated that the University might like to confer degrees upon some eminent visitors attending the conference.

UNIVERSITY OF OXFORD.

THE Board of Management for the Francis Gotch Memorial Prize in Physiology has awarded the prize to John Carew Eccles, B.A. Magdalen, M.B., B.S.Melb., who was recently elected to a Junior Research Fellowship at Exeter College.

At a congregation held on December 17th the following medical degrees were conferred:

D.M.—Sibyl R. J. Eastwood.
B.M.—H. A. Byworth, L. W. H. Bertie, H. P. Gilding, A. W. Cubitt, A. P. Kingsley, R. E. Havard.

UNIVERSITY OF CAMBRIDGE.

AT a congregation held on December 19th the following medical degrees were conferred:

M.D.—P. Lazarus-Barlow.
M.B., B.CHIR.—*G. F. Oakden, A. S. Hollins, W. S. Grove.

* By proxy.

UNIVERSITY OF LONDON.

THE title of Emeritus Professor of Pathology in the University has been conferred on Sir Frederick Andrewes, O.B.E., D.C.L., M.D., F.R.C.P., F.R.S., who retired from the University Professorship of Pathology, tenable at St. Bartholomew's Hospital Medical College, in July, 1927.

Lord Dawson of Penn has been appointed the representative of the University at the tercentenary celebrations in honour of William Harvey, to be held in May, 1928, at the Royal College of Physicians.

The following candidates have been approved at the examinations indicated:

THIRD M.B., B.S.—*†§R. C. Brock, *§N. L. B. V. Eckhoff, *‡A. B. Hyman, *†§‖R. S. Pilcher (University Medal), *†§K. H. Watkins, C. A. Amesur, V. FitzC. Anderson, W. A. Ball, B. Barling, P. Berry, L. R. B. Birt, J. W. Bottoms, R. V. Bowles, F. W. Bradley, Doris E. Bunbury, M. R. Burke, Isabella M. G. Butler, J. C. D. Carothers, Phyllys P. Case, J. A. Cholmeley, M. M. Cowasjee, F. H. N. Cruchley, R. P. P. Davies, D. A. Dewhirst, H. A. Dunlop, Phyllis M. Edgar, D. C. McC. Ettles, L. Fatti, R. R. Fells, J. R. Forrest, Isabella Forshall, K. T. Gajjar, Helena M. Gambrell, Dorothy Godden, A. Golombek, Helen R. Goodman, S. W. Hardwick, G. E. Harries, Catherine M. Hext, S. L. Hicks, J. W. O. Holmes, Isabel E. S. James, A. W. Kendall, A. J. King, Eileen M. King, J. G. Kingsbury, Caroline M. Kingsmill, F. E. Kingston, K. H. Lachlan, R. A. V. Lewys-Lloyd, Isabella L. H. Livingstone, L. J. McGregor, R. M. Maher H. L. Marriott, S. P. Meadows, R. L. Middley, W. S. Morgan, L. Moss, M. A. Nicholson, W. D. Nicol, Ethel E. M. Ogilvie, N. D. Patel, R. T. Payne, K. R. T. Peiris, Ethel E. A. Pepper, G. M. Phadke, L. G. J. Pitt-Payne, M. M. Posel, E. R. Rees, Elsie E. A. Ridley, Muriel Rippin, E. H. Roche, J. E. C. Rouse, B. F. Russell, Margaret V. Saul, W. D. Sheldrake, E. W. Skipper, Hilda W. Slack, W. R. C. Spicer, Olive F. Sydenham, Victoria W. Symonds, Dorothy Taylor, Kathleen A. Vernon, R. F. Ward, J. G. Weston, Dorothy M. Wilkins, M. C. Wilkinson, J. E. B. Williams, Elsie B. Wright, H. D. Wyse.

*Honours. † Distinguished in Medicine. ‡ Distinguished in Pathology. § Distinguished in Surgery. ‖ Distinguished in Midwifery.

UNIVERSITY OF LEEDS.

THE West Riding panel practitioners' prize in medicine and the William Hey medal have been awarded to D. W. Currie, M.B., Ch.B.Leeds.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examinations indicated:

M.D.—R. W. Brookfield, Ethel Browning, Kathleen Edgecombe, M. T. Morgan.
CH.M.—W. H. A. Dodd.
M CH.ORTH.—L. O. Betts.
FINAL M.B. AND CH.B.—*W. S. Creer, *G. L. Roberts, †S. L. Tunnicliffe. *Part III*: A. B. Anderson, A. N. Cameron, D. E. Davies, Lilian W. Edwards, A. W. Green, Elsie A. Griffiths, I. Gurland, R. E. Jackson, T. Lotter, J. McWilliams, J. J. O'Donovan, G. W. Phillips (Medicine), J. W. Pickup, E. S. Smith, E. F. Thompson. *Part I*: W. W. Gerrard (Pathology), I. Kossew, I. Lipschitz. *Part II*: Ariel R. S. Deacon, H. F. Cohen, R. A. Furniss, J. E. Jones, Hilda M. C. McMahon-Garry, N. W. Roberts (Public Health), Elizabeth B. Robson.
DIPLOMA IN TROPICAL MEDICINE.—H. S. Bawa, R. R. Evans, F. A. Khan, M. M. Khan, P. N. H. Labuschagne, W. J. Laird, B. F. Lewin, A. I. Meek, H. C. Mehta, M. V. Menon, H. V. R. Miller, S. N. Mokand, F. Murgatroyd, Pauline V. Murray, P. L. Nirula, D. O. Peters, J. H. Pottinger, G. V. S. Rodriguez, H. Singh, S. D. Sturton, S. A. Wilkinson.
DIPLOMA IN TROPICAL HYGIENE.—P. N. H. Labuschagne.

* With Honours Class II Surgery. † With Honours Class II Medicine.

UNIVERSITY OF MANCHESTER.

THE following appointments have been made: Lecturer in anaesthetics, E. Falkner Hill, M.B., Ch.B.; lecturer in diseases of the throat and nose, F. G. Wrigley, M.D.; lecturer in histology, Miss E. R. A. Cooper, M.D., M.Sc.; demonstrator in anatomy, Miss Fanny Howe, M.B., Ch.B.; demonstrator in chemistry in the department of bacteriology and preventive medicine, Mr. W. M. Short, M.Sc.

UNIVERSITY OF EDINBURGH.

AT the graduation ceremony held in the Upper Library of the University on December 16th, under the presidency of Sir J. Alfred Ewing, Vice-Chancellor, the following degrees were conferred:

M.D.—E. W. Anderson, M. J. Bett, †G. Brewster, ‡J. C. B. Craig, ‡S. E. Croskery, †D. M. Dunlop, H. J. C. Durward, J. F. Fraser, I. M. D. Grieve, H. H. Holden, G. J. Hughes, †D. J. A. Kerr, *J. G. Kinnmonth, Helen M. Russell, H. T. Smith, †D. Stewart, †D. Wilkie.
CH.M.—†A. L. M'Gregor.
M.B., CH.B.—C. H. B. Adamson, H. J. van den Berg, A. G. Bonnyman, K. V. R. Choudari, Bessie L. Clark, A. J. Clements, B. Cohen, J. L. Cowan, T. A. Edwards, E. A. Fergusson, Jessie D. Forrester, J. Fraser, L. M. E. R. Henshaw, W. H. Houghton, S. Jesudasen, W. H. E. Johnson, F. M. Khan, J. Kingsley, A. A. MacArthur, J. W. B. Macdonald, A. E. Mackintosh, K. M'Neill, A. G. R. Macpherson, A. W. MacQuarrie, F. F. Main, R. Mennie, W. M'G. Mitchell, W. D. Moore, J. S. R. Pandit, W. H. D. Patterson, P. J. G. Payne, Frances M. Porter, L. L. Ratazzi, A. S. Reilly, R. H. Robertson, J. M. Russell, B. S. Sandhu, Margaret A. Spencer, E. R. Thomson, E. W. T. Webber, Elisabeth M. Williams.
D.P.H.—Margaret A. Mackenzie.

* Awarded gold medal for thesis. † Highly commended for thesis. ‡ Commended for thesis.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following 49 candidates, out of 94 entered, having passed the requisite examinations, were admitted Fellows on December 16th:

H. H. Barnett, I. Blain, P. D. Braddon, C. V. Braimbridge, J. W. D. Buttery, W. J. W. Close, P. Connan, C. E. Cross, J. T. Danis, Bessie P. Darling, B. V. Dunn, J. T. R. Edwards, H. G. Furnell, E. G. Gerstenberg, R. E. Gibson, E. G. M. Gilchrist, J. C. Gillies, W. C. Gissane, W. R. D. Griffiths, E. W. Gutteridge, W. G. Hazelton, W. A. Hervey, S. W. Houston, L. W. Johnston, Mary Keith-Thompson, G. B. King, F. A. Lamb, G. E. J. Lannin, G. Lowe, D. J. Martin, R. Morton, E. A. Menon, K. R. Menon, J. MacGowan, A. A. MacKelvie, D. C. MacRae, S. MacVicar, D. J. P. O'Meara, N. M. Rao, S. I. H. Reid, C. C. Ross, K. Rush, A. E. Sawday, H. M. Simpson, H. Singh, C. M. Smithies, T. W. Stephens, N. Waddle, A. S. Wong.

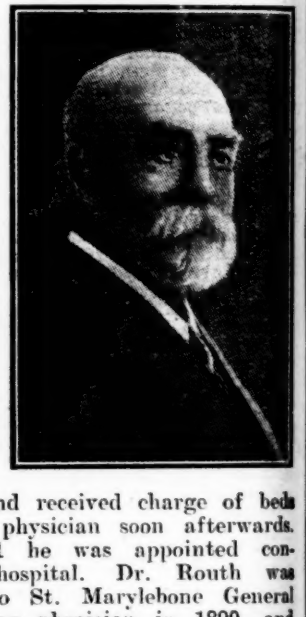
Obituary.

AMAND JULES McCONNELL ROUTH, M.D., F.R.C.P.,

Consulting Obstetric Physician, Charing Cross Hospital and the Samaritan Free Hospital for Women.

WE much regret to report the death, on December 18th, of Dr. Amand Routh, who rendered distinguished services to gynaecology and took a great interest in the active campaign for the prevention of infantile mortality.

Amand Routh, who was the son of Dr. C. H. Routh, also a gynaecologist well known in his day, was born in London in 1853; he was educated at King's College School and University College Hospital; he obtained the diplomas M.R.C.S., L.R.C.P. in 1880, and graduated M.B., B.S.Lond. in the following year. In 1882 he proceeded M.D. and became M.R.C.P.; he was elected F.R.C.P. in 1900. During his student days he was captain of the Rugby football club of University College Hospital from 1875 to 1877, and for several years was a member of the United Hospitals football team. After practising for a little time in Upper Montagu Street he removed to Manchester Square, where he resided for nearly forty years; he also had a house and grounds close to the golf course at Northwood, which enabled him to devote himself to this game, of which he was no mean exponent. He was appointed pathologist and chloroformist at the Samaritan Free Hospital for Women in 1881; he became out-patient physician in 1882, and received charge of beds in 1884, being elected full physician soon afterwards. On his resignation in 1901 he was appointed consulting physician to the hospital. Dr. Routh was elected obstetric physician to St. Marylebone General Dispensary in 1882, consulting physician in 1890, and consulting obstetric physician to St. John's Hospital, Twickenham, in the following year. From 1883 to 1898 he held the post of assistant physician-accoucheur to Charing Cross Hospital; he then succeeded Dr. Watt Black as obstetric physician and lecturer on midwifery. When he resigned in 1912 he was appointed consulting obstetric physician to the hospital. Soon after his appointment to the gynaecological ward of Charing Cross Hospital he succeeded in getting the rule removed which prevented obstetric physicians from performing abdominal operations unless the patient was pregnant. He was examiner in midwifery and gynaecology for the Conjoint Board from 1894 to 1900, for the University of London from 1901 to 1904, for the University of Birmingham from 1903 to 1906, and for the University of Cambridge from 1909 to 1915. He was on the standing committee of convocation of the University of London from 1904 to 1923, and a member of the Board of Advanced Medical Studies from 1906 to 1910. In 1910, on the invitation of the committee of the International Congress of Obstetrics and Gynaecology at St. Petersburg, he opened a discussion on Caesarean section. He attended this congress as representative of the Royal Colleges of Physicians and Surgeons and of the Royal Society of Medicine. He published his report in a book entitled *Cases of Caesarean Section by Living Obstetricians in Great Britain and Ireland* (1911). This report, to which we referred at the time (JOURNAL, 1911, vol. i, p. 219), led to much discussion, and it was subsequently concluded that in aseptic and suitable cases when there had been no attempts at delivery the mortality of Caesarean section was only about 2 per cent. Afterwards, however, the operation was employed in many unsuitable cases of eclampsia and antepartum haemorrhage, and for minor pelvic contractions.



In 1917 he was elected president of the Harveian Society, and his presidential address dealt with ante-natal syphilis.

Dr. Routh joined the British Medical Association in 1881, and about the same time was elected a Fellow of the old Royal Medico-Chirurgical Society and of the Medical Society of London, becoming a member of the councils of these two societies in 1902. He joined the original Obstetrical Society of London in 1882, and was a member of its council from 1886 to 1888; librarian from 1898 to 1900; secretary from 1900 to 1903; vice-president, 1904; and in 1911-13 was President of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, with which the old society had united. During his two years' presidency Dr. Routh delivered presidential addresses emphasizing the need for advance in the chemical, physiological, and pathological sides of menstruation, pregnancy, labour, and lactation. One of these addresses was the basis of a leading article in our columns on "The return to chemistry" (1911, vol. ii, p. 1118). Dr. Routh also contributed to the volume on *Gynaecology* edited by Playfair (1894), for Allbutt's *System*, and published a large number of papers in various medical periodicals.

In 1912 Dr. Routh joined the council of the National Association for the Prevention of Infantile Mortality, and persuaded this society to include in their scope the ante-natal causes of death and the need for medical supervision of pregnancy. In 1914 he delivered a lecture on ante-natal hygiene and its influence on infantile mortality (JOURNAL, 1914, vol. i, p. 355), which aroused considerable interest. It was estimated that the number of foetuses which perished was equivalent to the death rate in the first year in life, which was then about one in ten. Deputations to the Local Government Board followed, and an important conference was held at the Guildhall. Dr. Routh read another paper in April, 1914, on the need for research in ante-natal pathology, to which we referred in a leading article (1914, vol. i, p. 902). In the same year he gave evidence before the Royal Commission on Venereal Disease on the effect of syphilis on ante-natal and infantile mortality and disease. The consequence of his strenuous advocacy was felt after the war, when ante-natal clinics were founded throughout the country and medical supervision during early pregnancy became increasingly popular.

Dr. Routh was a strong opponent of artificial birth control, except under medical advice, and, at the Church Congress at Leicester, in 1919, he read a paper on the subject in which he advocated the two years' spacing of the arrival of children by voluntary abstinence. He was churchwarden at St. Paul's, Portman Square, for nearly twenty years, and for several years was a member of the London Ruri-decanal and Middlesex Archidiaconal conferences. He took a considerable interest in freemasonry from the year 1887, and obtained London Rank in 1910. He passed through the chairs of the Chère Reine (Charing Cross Hospital) Lodge, which he founded in 1903; of the University of London (1905); of the William Harvey Chapter in 1915; and of the University of London Conclave of the Order of the Secret Monitor in 1918. After his retirement from active practice in September, 1923, he removed to Folkestone and interested himself in local municipal affairs, being elected a member of the borough council in November of that year.

Dr. HENRY ERNEST KNIGHT, to whose death we referred in our issue of December 10th (p. 1123), took a very active interest in the work of the British Medical Association in Rotherham; he was chairman of the Division from 1909 to 1925, and a member of the Executive and Ethical Committees from 1925 to 1926. Dr. Stanley Wildman, honorary secretary of the Rotherham Division, writes: It seemed scarcely credible that Dr. Knight should have passed beyond, when it was remembered that, precisely a week earlier, at our annual dinner on November 25th, he had been his usual cheery self. One cannot help feeling that with a smaller sense of responsibility and a less warm devotion to duty he might have been still with us. Never was a man more devoted to the ideals and ambition of the British Medical Association. His sixteen years of chairmanship in the Division had afforded him a full knowledge of all the difficulties that may beset a medical man, and his advice and example had always been helpful. It had been hoped that in the very near future he might have been elected chairman of the Yorkshire Branch. The Division and the profession of the district are the poorer for the loss of a kind, loyal, and honoured brother. A remarkable tribute was paid to his memory at his funeral on December 5th. Rotherham Parish Church was crowded to its fullest capacity with a congregation representing the public and professional life of the district, while thousands of the general public gathered outside to pay their respect. His loss will be greatly mourned, especially by his professional brothers, to whom he had always been ready and willing to give help or advice. The wreath which they sent to his funeral bore the inscription: "With sorrow and remembering affection."

Dr. WILLIAM JOHN FRANKLIN CHURCHOUSE, who died on December 5th, was born in 1855, and received his medical education at Charing Cross Hospital. In 1879 he obtained the diplomas L.S.A., L.R.C.P.Ed., and L.M., and four years later the L.R.F.P.S.Glasg. He had held the posts of medical officer of health for the Daventry Urban and Rural Districts, and had contributed two clinical notes to the BRITISH MEDICAL JOURNAL. He was a member of the Executive Committee of the Northamptonshire Division of the British Medical Association from 1923 to 1925, vice-chairman in 1924, and chairman from December, 1924, to December, 1925.

Dr. MAITLAND THOMPSON, who died suddenly at his residence in Richmond, on November 12th, at the age of 56, received his medical education at St. Bartholomew's Hospital; in 1884 he obtained the diplomas M.R.C.S.Eng., L.R.C.P.Ed., and L.M. After holding the posts of house-surgeon and house-physician at the West London Hospital in 1886, he was attached to the Scots Guards as surgeon, and accompanied Lord Wolseley's expedition to Khartum. On his return he practised for a time in Lincolnshire and then removed to Hemel Hempstead, where he was appointed surgeon, and later consulting surgeon, to the West Hertfordshire Hospital. He took an active interest in local affairs, was mayor of Hemel Hempstead, and a member of the Hertfordshire County Council. Dr. Thompson was also chairman of the local Conservative Association, and was selected as their candidate for Parliament, but stood down in favour of an official nominee. At the beginning of the late war he received a commission in the R.A.M.C., and served at several home stations until 1919, when he retired to Richmond. He was a member of the British Medical Association. A colleague writes: As a striking example of Maitland Thompson's genius for friendship he for forty-two years dined on May 27th with Bart's and Guy's friends made during student days. He will be much missed by many friends, and leaves a widow and two sons.

We regret to record the death, on November 23rd, of Dr. GEORGE EDWARD MOORE of Maidenhead. He was born in 1857, received his early education at the Norwich Grammar School, and then proceeded to King's College. He took the diplomas of M.R.C.S.Eng. and L.R.C.P.Lond. in 1874, and graduated M.B.Lond. with honours in medicine in 1875. He was a keen athlete, winning the half-mile at the Inter-Hospital Sports, and playing Rugby football in the United Hospitals XV. On the formation of the Thames Valley Rugby Football Club he was elected its president. After serving as house-physician to King's College Hospital, he joined as junior partner with Drs. Richard Goolden and Playne at Maidenhead, where he continued to practise till his death. He was president of the Oxford and Reading Branch of the British Medical Association in 1885 and chairman of the Maidenhead Division in 1912-13. He took great interest in educational work, and was a governor of the County Boys' School; for several years he was chairman of the board of governors of the Maidenhead Hospital. Dr. Moore was made a justice of the peace for the borough in 1924. His

son, Lieutenant R. L. Moore of the Somerset Light Infantry, was killed in 1914. Another son is Dr. Gilbert Moore, *M.C.*, who was in practice with his father.

Dr. JOHN EXLEY died on December 8th, aged 62. He was educated at Yorkshire College, Leeds, and took the diplomas of L.R.C.P.I. in 1887 and M.R.C.S.Eng. in 1888. Early in his professional career he acquired the practice of Dr. Hick of New Wortley, and had remained in the district ever since. He was medical officer of the Leeds Prison, Armley, for twenty-five years. He resigned the post of district medical officer for Wortley in August, 1926, which he had held for thirty-seven years. In 1920 he was elected a member of the city council, and represented the New Wortley Ward for three years. In 1924 he was appointed a justice of the peace. He is survived by his widow, one son (Dr. Cyril J. G. Exley), and one daughter. At the sitting of the Leeds Police Court on December 8th sympathetic reference was made to Dr. Exley's death from the bench, and by the chief constable and members of the legal profession.

Dr. CHARLES MACARTHUR ALLAN of Longton, who died on December 12th, was a member of an old Highland family and was born at Strathspey 67 years ago. He received his early education at Granton and Old Aberdeen Grammar Schools, and studied later at the University of Edinburgh. He graduated M.A.Aberd. in 1882, M.B., C.M.Edin. in 1887, and proceeded M.D. ten years later. He commenced practice in Longton in 1888 in partnership with the late Dr. James Grant, on whose death he succeeded to the practice; he was surgeon to the Longton Hospital for twenty years. He took great interest in ambulance work, and in recognition of his services was appointed an honorary life member of the Order of St. John of Jerusalem. He was public vaccinator for Longton and formerly school medical officer, and had served as a member, vice-chairman, and chairman of the Longton Education Committee. Dr. Allan was president of the North Staffordshire Medical Society for 1923-24, and was a member of the North Staffordshire Division of the British Medical Association. He had been president of the Meir Golf Club since its inception in 1889.

Dr. WILLIAM GIBB DUN, who died on December 10th, in his 78th year, received his medical education at Glasgow, where he graduated M.B., C.M. with commendation in 1877, and proceeded M.D. three years later. He became F.R.F.P.S.Glas. in 1881. After holding the post of house-surgeon at the Royal and Western Infirmaries he was appointed assistant to the professor of clinical medicine in the University of Glasgow in 1881. For many years he was assistant physician to the Western Infirmary and physician to the Society for the Prevention of Cruelty to Children. He was an ex-President of the Royal Faculty of Physicians and Surgeons of Glasgow, of which he was for some years treasurer, and was president of the Glasgow Medico-Chirurgical Society.

Dr. JOSEPH MCGRATH, who died on November 11th at the age of 59, received his medical education at Queen's College, Belfast, and graduated M.B., B.Ch., B.A.O. of the Royal University of Ireland in 1893. He served during the war in the Tank Corps. He had practised for several years in South Kensington, and was a member of the British Medical Association.

In a footnote to his paper in our issue of December 3rd (p. 1019) we had to announce with regret the death, in his sixtieth year, of Dr. KARL PETRÉN, professor of medicine in the University of Lund. He was a well known writer on neurological subjects, metabolic diseases, especially diabetes, nephritis, and tuberculosis. He was an active attendant at medical societies and international congresses, and a few months before his death, which occurred from cerebral haemorrhage on October 15th, he took part in the discussion on epidemic encephalitis in the Section of Nervous and Mental Diseases, and read a paper on the statistical evidence of the value of insulin in the Section of Medicine at the Annual Meeting of the British Medical Association at Edinburgh last July. A sympathetic memoir by Professor Knud Faber of Copenhagen, with portrait, appears in the issue of *Hospitalstidende* for October 20th.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

BOTH Houses of Parliament were busy this week in hurrying bills through their closing stages to be ready for the Royal Assent, which was arranged to be given on Thursday, when the session was due to close. The House of Commons also debated unemployment and the state of British agriculture. No official information was available on the Government programme of business for next session, but a Factory Bill is still anticipated, and a suggestion has been heard during the week that the Government may introduce in 1928 a National Health Insurance Bill based on the recommendations of the Royal Commission.

Medical and Dentists Acts Amendment Bill.

The G.M.C. and the Irish Free State.

In the House of Commons, on December 16th, Sir Kingsley Wood moved the second reading of the Medical and Dentists Acts Amendment Bill, embodying an agreement between the Irish Free State and the United Kingdom consequent on the establishment of the Free State and legislation which had followed; by it, he said, the General Medical Council had ceased to exercise any authority or control over the medical profession in the Irish Free State, and had ceased also to be able to place on its *Register* students who had obtained medical qualifications in the Irish Free State. Both sides regarded the position as unsatisfactory, and had been negotiating. By an interim arrangement the General Medical Council agreed to accept for the United Kingdom *Register* students with qualifications obtained in the Free State. To validate that agreement was one of the objects of the bill. A signed agreement, set out as Part I of the schedule of the bill, had been reached early this year, and had the concurrence and support of the General Medical Council. The Government had been assisted in the matter by Sir Donald MacAlister, president of the Council. Under the agreement the Council would continue to admit to the *Medical Register* all persons who, prior to the establishment of the Irish Free State, would have been admissible in respect of qualifications there obtained. The Council would possess the power it formerly had of controlling the examinations giving the right to such admission, so far as was necessary for keeping the United Kingdom *Register*. The Irish Free State would establish an Irish Free State Register, and would have complete control of that Register and of the profession in the Irish Free State. The bill provided for admission to that Register on equal terms of all persons on the United Kingdom *Register*. The position with regard to the Dentists Act was similar, and was embodied in Part II of the schedule. The Government had been assisted by Sir Francis Acland, chairman of the Dental Board of the United Kingdom. The Free State had passed legislation to give effect to the medical side of the agreement. Legislation in regard to the dental side was now going through in the Irish Free State, where two bills were required. He thought the bill before the House was a happy solution of the difficulties which had arisen. The House read the bill a second time without opposition.

Nursing Homes Registration Bill.

On December 16th the House of Commons considered the Nursing Homes (Registration) Bill as reported, with amendments, from Committee. Captain Cazalet moved a new clause as follows:

Power of Minister to Exempt Christian Science Nursing Homes.

(1) The Minister of Health may grant exemption from the operation of this Act in respect of any nursing home, as respects which he is satisfied that it is being or will be carried on in accordance with the practice and principles of the body known as the Church of Christ Scientist.

(2) It shall be a condition of any exemption granted to a nursing home under this section that the nursing home shall adopt and use the name of Christian Science nursing home.

(3) An exemption granted under this section in respect of a nursing home may at any time be withdrawn by the Minister if it appears to him that that home is no longer being carried on in accordance with the said practice and principles.

Captain Cazalet said the bill, as received from Committee, would, when passed, compel any nursing home to have in charge of it a qualified medical practitioner or a qualified nurse. The method of healing practised by those who professed Christian Science was

entirely different from that of the medical profession, and a qualified medical man or qualified nurse must disapprove of the methods adopted in Christian Science homes. Captain Cazalet explained that these homes, of which there were thirty to forty in England and Wales, did not take maternity cases, cases requiring surgical operation, or cases of infectious diseases. No attempt was made under the proposed new clause to evade any of the rules and regulations on ventilation, sanitation, and such matters. The homes were prepared to submit to any inspection and registration thought desirable by the Ministry of Health, and he understood the new clause conformed with the requirements of the Ministry. Viscountess Astor seconded the proposed clause. Sir Cyril Cobb, who had been chairman of the Select Committee on Nursing Homes, said that committee held, on the evidence which came before them, that there should be no exemptions for institutions in the nature of nursing homes where payment was made. They had been told, among other things, that the General Medical Council would ensure that homes kept by medical men, where they received patients for fees, were properly run, and that they need not fear such homes would not be provided with trained nurses. But evidence showed some of the worst cases of neglect occurred in nursing homes which were run by doctors. On the proposed clause they were not dealing with a religious question, but a medical and nursing question. Though a small exemption had been made in the bill for existing nursing homes, the evidence had been conclusive that a nursing home should have qualified nurses on its staff, even if it did not have at the moment a qualified nurse or a qualified medical man at its head. He must vote against this clause, which, according to Sir Kingsley Wood's words in Committee, would drive a horse and coach through the bill. Mr. Morris asked how the Minister of Health would be kept informed of any modification of Christian Science doctrine, practice, and principles. Lady Astor: They do not change.

Sir Richard Luce, as a member of the Select Committee on Nursing Homes, opposed the clause. He said the Committee had received two applications for exemption of nursing homes, one from members of the medical profession and the other from representatives of the Christian Science Church. It became evident that it was unwise to grant exemption for homes under the charge of medical men, and it would be unfair to give exemption to any other body which claimed it on much the same grounds. Before the Select Committee the representative of the Christian Science Church had said there were only three Christian Science nursing homes in the country, besides places in the nature of boarding houses where patients could go for treatment. Now Captain Cazalet said there were thirty or forty Christian Science nursing homes. If the "boarding houses" were now being included these need not come under the name of nursing home, and there would be no great hardship in closing down the few which were definitely nursing homes. The clause did not seem to guarantee that the homes it proposed to exempt would be properly inspected. The Minister was not to take the responsibility of inspecting them, and the guarantee that they belonged to a particular Church did not give users any guarantee that the homes were being run on proper lines. Other unorthodox methods of treatment were in vogue in this country. How could the Minister of Health in future refuse exemption if these also set up homes? He hoped the House would not agree to the clause.

Mr. Chamberlain said he was not a Christian Scientist. So far as the practice of Christian Science was to substitute other methods for medical and surgical skill he disapproved of it. The House was not concerned with doctrines, but to see that no member of the public was deceived, and Christian Science was not carried on as medical treatment; there was no pretence that treatment which was given by Christian Scientists was offered as an alternative to medical treatment, or as a variety of medical treatment. If by bringing these homes under the bill the House required them to appoint a qualified nurse as superintendent that would be a piece of camouflage introduced so that they could be said to be nursing homes, and would be likely to deceive the public. Members were unwise to attempt to bring these homes within the bill.

Dr. V. Davies, intervening, said the bill referred to nursing homes. If the Christian Scientists referred to their homes as homes of rest or homes of treatment they would not come under the bill, and the public would not be deceived.

Mr. Chamberlain said he was advised that such institutions would come within the definition of nursing home in the bill. To say that the practices of Christian Science should not be carried on in an institution, though legal elsewhere, would be regarded as persecution of religious opinion. The inclusion of these institutions under the bill offered difficulties so serious that he could not contemplate it. The main consideration was to see that the public, if it entered one of these institutions, did so with its eyes open. His object would be secured if they could get some test whereby these institutions could be separated from homes set up by unqualified persons posing as medical practitioners. Captain Cazalet's clause carried out his ideas save in that the homes were still to be called nursing homes. Mr. Chamberlain suggested that Captain Cazalet should use some other title, such as "Christian Science houses," which did not involve any suggestion of medical practice. The public would not read the Act; they would read the title put up on the door of the institution. Mr. Montague suggested "Christian Science homes." Mr. Chamberlain said that even the word "home" suggested something in the nature of nursing homes.

Mr. Thomas said the Minister had made it clear that no body, whether Christian Scientists or otherwise, could come to the House with the hope it would concede the right to any institution to say, "No matter what we do, no matter what we practise, we are independent of any inspection." The House would not listen to any such claim. Captain Cazalet said those responsible for the new clause were willing to accept any name which the Minister might suggest and the House approve.

Dr. Fremantle asked the House to recognize how grave was the position of medical men called to make such an exemption. These were not questions of kindness, humanity, charity, or liberty. They were concerned with the protection of the public. He knew nothing about the homes for which exemption was claimed, nor did the Minister of Health. He understood there was no body in this country representing the Christian Science faith which could certify these homes. If they were rest homes they would attract people who had diseases, and to know whether they were nursing homes or not would become practically impossible. The more ignorant portion of the public did not know the difference between Christian Science and any other science. If the House opened the door to this, could they prevent it opening to the older and more widespread cult of homœopathy or to the osteopaths? He wondered how the Minister was to have the knowledge which would make it appear to him that these homes were not being properly carried on. Would the Minister and his officers have the right of inspection? He could not vote for this clause without further assurances.

Mr. Gerald Hurst said he had come to oppose the clause, but he thought the concession made by Captain Cazalet removed all suspicions and distrust. He suggested drafting amendments including the use of the word "institution" at certain passages in the bill.

Dr. V. Davies thought the alteration of the word "home" to "house" got over much difficulty. He could not associate himself fully with Dr. Fremantle. If it was necessary that homes or houses should be provided for the particular treatment of Christian Science, then people had a right to go to them, and neither medical men nor members of Parliament had a right to interfere, provided the public were safeguarded and were not being deceived. It would be impossible for a person of adult age to go into a Christian Science house in ignorance. Whether, when there, he would be well or ill treated was no concern of the community. He suggested that the Minister, to be satisfied that the house was carried on in accordance with the principles of the body known as the Church of Christ Scientist, should require the head of that church in this country to certify that it was one of their houses, carried on according to their principles. Sir Kingsley Wood said the head of the church would give the certificate. Miss Wilkinson remarked that there was no more profitable way of making money in this country than having some way of curing people which was different from anything previously advocated. Would the houses be certified by someone in this country or in Boston? Sir Kingsley Wood said the head of the church in this country was well known and would be recognized by the Ministry. Captain Cazalet's new clause was then read a second time and, with the substitution of "house" for "nursing home," was added to the bill.

On Clause 5 (Inspection of Nursing Homes) Mr. Gerald Hurst moved to insert "qualified nurse or" in page 4, line 37, after the word "some," to emphasize that when the medical officer of health deputed some official to inspect and visit nursing homes he should bear in mind that the official primarily qualified to deal with questions of nursing was a qualified nurse. Miss Wilkinson seconded, and appealed for a qualified nurse to see the back premises and the nursing side. She knew instances where septic and dirty material was stored in the kitchen or in the bathroom. A busy practitioner could not go into such details; they were jobs for nurses. The amendment was agreed to.

On Clause 8 (Local Supervising Authority) Mr. Chamberlain moved to insert as the authority "the council of each county as respects that county, and the council of every county borough as respects that borough." He said the Standing Committee before which the bill came had decided that a district committee whose medical officer was not otherwise employed might also act. Since the proceedings in Committee representatives of the various classes of local authority had agreed on the amendment which now stood in his name. This amendment went back to the original county borough or county council as the supervising authority, but powers were given to the authority to delegate its powers to the minor authorities, and the minor authorities had the right of appealing to the Minister if their application for such delegation were refused. Mr. Paling said the compromise had been reached without authority from the County Councils Association. Dr. Fremantle said that that association's chairman had power to act. Dr. Fremantle was certain that to leave the inspection entirely to county councils and county borough councils was best, as had been done in the Maternity Homes Act, but friends of the bill had the alternative of losing it or of accepting the compromise. With great hesitation he asked them to accept the compromise and asked the Minister to see that the bodies to whom the powers were delegated used them in the interests of the public. Miss Wilkinson condemned what she thought a thoroughly retrograde step. She had resolutions from the National Council of Nurses against inspection being carried on by these smaller bodies. Colonel Applin asked for assurance that the midwife would not be under two authorities. Mr. Viant said a number of urban districts had their own medical officers. Mr. Chamberlain said he would not put his name to such a compromise, even to secure the bill, unless convinced it was a good one and would work out in practice. The next amendment with reference to delegation said:

> The council of a county may, on the application of the council of any county district within the county, delegate to the district council, either with or without any restrictions or conditions as the county council thinks fit, any of the powers or duties of the county council under this Act.

He felt certain these words would avoid the duplication of inspection. Where a minor body had a competent staff undertaking work in connexion with pre-natal conditions, a county council might delegate the inspection of maternity homes to them and say, "Will you take from us the inspection of midwives and act as our agents?" It would be possible to make arrangements of that kind. Miss Wilkinson asked whether the effect of what the Minister had said was to make it possible for the county council to hand

over to the smaller authorities the supervision of midwives, which they could not do under the terms of the Maternity Homes Act. Mr. Chamberlain said the county council could not delegate responsibility. They might make arrangements for the inspection to be carried out by the officers of another authority, if that authority cared to lend them for the purpose. If was not a question of the delegation of responsibility, but merely a question of the particular individual who would make the inspection.

The first amendment restoring the powers of inspection to county councils and county borough councils was then made by the House, which also added the amendment authorizing delegation (quoted above by Mr. Chamberlain), and a further subsection declaring that:

> If any district council by which an application is made under subsection (2) of this section is aggrieved by the refusal of the county council to delegate any of its powers or duties under this Act, or to delegate any such powers or duties otherwise than subject to conditions or restrictions, the district council may make a representation to the Minister with respect to the matter, and the Minister, after consultation with the county council, may direct the county council to delegate to the district council, either with or without restrictions or conditions, such of its powers and duties under this Act as the Minister thinks proper, and the county council shall comply with any direction so given.

After adding consequential amendments on the payment of expenses the House reported the bill and, on the motion of Mrs. Philipson, it was read a third time.

Viscount Gage moved the second reading of the Nursing Homes (Registration) Bill in the House of Lords on December 20th.

Lord Dawson of Penn said there was not universal approval of the bill among the laity and the professional men who would have to carry out its provisions. The sole justification for the bill was that the report of a Committee of the House of Commons which considered the matter disclosed very serious abuses which had gathered round certain nursing homes in various parts of the country. The public were being exploited, and he thought that anyone who had studied that report sufficiently must recognize that there were abuses which would justify action on the part of the Government. So far as the improvement of nursing homes from a professional point of view was concerned he was very sceptical as to whether it was possible to improve them by any system of inspection. The real way to secure improvement was to set up proper institutions and buildings for the care of the sick. In so far as they did that the more inefficient nursing homes would cease to exist. The bill gave powers of a most extensive character, and those powers should be used with great discretion, or they might lead to intolerable tyranny. He feared that there might arise a pettifogging type of inspector, who would do more harm than good. One incidental effect of legislation of this kind would be that they would put the medical profession under the local authorities, and the more they did that the more would they make for the municipalization of medicine in this country. He could understand people who were in favour of a State medical service voting for this bill. He was strongly in favour of setting up some sort of committee which would correspond to the committee set up by the education authority. That Committee would deal with the health services, and would bring the official and unofficial sections together. The real case for the bill was that it would prevent the abuses that were disclosed before the Select Committee. He would therefore support the bill.

Earl Russell criticized the clause dealing with Christian Science homes, and protested against the Minister of Health's suggestion that these homes should be called Christian Science houses. The Marquess of Salisbury said that many of the points raised in the debate were committee points, and no pressure would be brought to bear on the House in regard to any amendment brought forward. In reply to Lord Dawson, he contended that if they were to have control of any sort they must have inspection.

The bill was read a second time.

Mental Deficiency Bill.

The Mental Deficiency Bill was read a first time in the House of Lords on December 16th, and passed through Committee without amendment on December 20th.

Landlord and Tenant Bill: Compensation for Improvements.

During the Committee stage of the Landlord and Tenant Bill in the House of Lords, on December 16th, the Duke of Northumberland moved to amend the subsection of the bill which provided that in claims for improvements made by leaseholders "premises used for carrying on a profession shall be deemed to be premises used for carrying on a trade or business." He proposed to insert the words "A profession for the purpose of this section means the habitual and regular practice of a learned or skilled profession as the chief means of livelihood." He said the object of adding "professions" in the section was that the Act should apply to learned and scientific professions which were essential to any civilized society, to doctors, dentists, and so forth. Lord Sumner said a person who practised the subordinate arts of healing—the man who took *x*-ray photographs was a good instance—would not be regarded as a tradesman and would not be called a business man, but to what profession did he belong? He supported the amendment. The Lord Chancellor said the framers of the subsection intended to meet the case of a doctor who wished to add a surgery to the house, where, if at the end of the term some value remained to the landlord, the tenant should have compensation for the unexhausted value. The professional man had no right in respect of goodwill. The definition of profession proposed by the Duke of Northumberland would raise difficulties. If at the beginning a doctor got little profit from his profession, should he for that reason be cut off from compensation if, having found the money for the surgery, he left it? To meet the point raised by the Duke, Lord Cave offered to amend the subsection so that it read "premises regularly used for carrying on a profession." The Duke of Northumberland then withdrew his amendment and Lord Cave's suggestion was accepted. Other amendments were made.

The House of Lords read the Landlord and Tenant Bill a third time on December 19th, and returned it to the Commons with amendments.

National Health Insurance.—At a rough approximation Mr. Chamberlain estimates that some 14,000,000 persons insured in England and Wales under the Health Insurance Act lost upwards of 150,000,000 working days from sickness in 1925, and upwards of 169,000,000 working days in 1926. No data are available on days lost through sickness in the general population.

Health of Troops in China.—Introducing, on December 14th, a supplementary estimate of £3,090,000 for British troops in China, Commodore Douglas King, Financial Secretary to the War Office, said that the troops at Shanghai had been in a confined space with improvised encampments and restricted facilities for recreation. Their health, in view of these circumstances, had been very satisfactory. During the early months of the occupation there had been a serious outbreak of pneumonia, attributed to the climatic conditions and to the common habit of the Chinese of spitting on the ground everywhere, in public carriages, and all public places. Mr. Trevelyan, in an attempt to learn the average amount of sickness among the British troops in China, said he was never able to get any definite information as to the number out there. He would assume that there was an average of 20,000 during this year. According to figures supplied, the approximate number in hospital in March was 580, in April 740, in May 870, in June 959, in July 1,309, in August 1,132, in September 1,191, in October 799, and in November 713. These figures showed that there were always something like one in twenty in hospital. He did not think that was a very good average. Mr. Wellock drew attention to the statement in a medical newspaper that the rate of venereal disease among the British troops at Shanghai had been high and had given the command much anxiety. Many tragedies would follow what an eminent doctor who had been out to China stated to have taken place. The estimate was carried.

Small-pox.—The Home Secretary states that during the year ended December 12th, 1927, eight cases of small-pox had been notified in prisons of England and Wales. Prisoners suffering from small-pox were removed at once to hospitals for infectious diseases. The Minister of Health has no precise information on the cost of recent outbreaks of small-pox. This cost is met from local funds. In an answer to Mr. Groves on December 15th, Mr. Chamberlain said forty-five cases of small-pox recently occurred in Newcastle-on-Tyne Poor Law institution. Forty-two patients, whose ages ranged from 17 to 70 years, had been vaccinated in infancy only; one had been revaccinated ten years ago. Before the outbreak there had been no general revaccination of the inmates for fifteen years. Inmates recently vaccinated or revaccinated had been attacked by small-pox, but in no case had the vaccination been successful.

Hospitals and Hospital Beds.—Earl Winterton states that in 1925 the number of State-public, local fund, and private aided hospitals and dispensaries in British India was 3,972, and the number of beds available 45,049; the number of indoor and outdoor patients treated was 738,570 and 40,472,780 respectively. The number of female hospitals and dispensaries was 173, with 4,249 beds available; the number of beds available for women in general hospitals was 11,260.

Treatment by Sunlight and Vapour Baths.—In an answer to Commander Kenworthy, Mr. Chamberlain said he had visited the sunlight and vapour baths of the Hull Corporation and regarded them as a valuable experiment, but they had not been long enough in existence for him to recommend a similar system to other municipalities. Answering Mr. Hardie, Mr. Chamberlain said he did not propose the introduction of legislation to control lay establishments for treatment by ultra-violet rays and other radiations.

Prescription of Alcohol.—Answering Mr. Macquisten on December 15th, Mr. A. M. Samuel said it would not be practicable to exempt from duty spirits consumed on the advice of doctors. The law provided for a rebate of about four-fifths of the duty on spirits in recognized medical preparations. If spirituous preparations needed to be prescribed medicinally to insured persons the cost fell on the drug fund, and there was no question of personal hardship to deter panel doctors from prescribing. Mr. Macquisten, in his question, alleged that panel and other doctors frequently prescribed the use of spirits in influenza and cognate illnesses, and suggested that in all such cases panel doctors should be in a position to supply patients with duty-free spirits for medicinal purposes. He offered to give instances where constituents who were lifelong abstainers had been ordered by their doctors to consume spirits medicinally.

Nutritive Value of Skimmed Milk.—Sir Kingsley Wood states that rather more of the nutritive constituents of milk other than fat can be obtained for one penny from condensed skimmed milk than from ordinary milk; as far as energy value is concerned considerably more is supplied by condensed skimmed milk, owing largely to the sugar which it contains. The poorness in fat, however, which amounts to about 0.5 per cent., renders this milk unsuitable for infants.

Food and Drugs Acts.—Dr. Davies asked Mr. Chamberlain whether he would give instructions that in future the authorities administering the Sale of Food and Drugs Acts should concentrate their activities upon taking more samples of the foodstuffs of

the poor, such as polonies, sausages, and potted meats. Mr. Chamberlain said he was not empowered to instruct local authorities, who could not confine their attention to selected articles.

Blind Persons.—The cost of administering the Blind Persons Act, 1920, in England and Wales amounts to about £650,000 a year. This is exclusive of the large amounts spent by voluntary agencies for the purposes of the Act, and of the contributions made by the Exchequer and the local education authorities for education and training of the blind. The number of registered blind persons in England and Wales on March 31st, 1927, was 46,822. Of these there were 17,232 between the ages of 50 and 70.

Notes in Brief.

The Minister of Health will shortly publish figures giving particulars of the results of various schemes for the treatment of tuberculosis.

The Committee on Vaccination has met thirty times, and Mr. Chamberlain states that it is now considering its report.

Medical News.

THE foundation stone of the extension building of the Elizabeth Garrett Anderson Hospital, Euston Road, London, was laid on December 15th by Sir Alan Garrett Anderson, K.B.E., the son of the founder.

THE Royal College of Physicians of London will be closed from to-day, Friday, December 23rd, to Saturday, December 31st, both days inclusive.

THE meeting of the St. John's Hospital Dermatological Society arranged for December 28th has been cancelled. The next meeting will be held at St. John's Hospital, 49, Leicester Square, W.C., on Wednesday, January 25th, 1928. The annual oration before the society will be delivered by Sir John Bland-Sutton, Bt., on May 23rd, the subject being the debt of dermatology to optical glass.

AT the meeting of the Tuberculosis Society on Friday, January 20th, there will be a discussion on the work and aims of tuberculosis care committees and kindred agencies. At this meeting, which will take place at 8 p.m. at the house of the Royal Society of Medicine (1, Wimpole Street, W.), the draft constitution and by-laws of the Tuberculosis Association will be submitted.

AN illustrated lecture on modern athletics will be given by Mr. H. M. Abrahams, at the Central Hall, Westminster, on January 13th, 1928, at 3 p.m., in aid of the Tavistock Clinic for Functional Nervous Disorders.

THE Royal Institution has now issued its programme of lectures to be given before Easter. Among the Friday evening discourses will be one (on March 2nd) on the psychology of the sick, by Sir Farquhar Buzzard, the new Regius Professor of Medicine at Oxford; and another by the daughter of his predecessor, Miss D. A. E. Garrod, on prehistoric cave art. The discourse on February 3rd will be by Professor E. C. C. Baly on photosynthesis, and that on February 17th by the Rev. Dr. E. M. Walker on the university, its ideals and its problems. The juvenile Christmas lectures this year will be given by Professor Andrade, who will tell his hearers about engines. Among the general courses of lectures will be one on the physiological aspects of flying, by Group-Captain Martin Flack, Director of Medical Research, R.A.F.M.S., on March 22nd and 29th, at 5.15.

THE report presented to the annual meeting of the constituents of the Metropolitan Hospital Sunday Fund, held at the Mansion House on December 19th, showed that the collections this year amounted to £86,935.

VISCOUNT KNUTSFORD presided at the annual meeting of the British Charities Association, held at Kingsway House, London, on December 15th. He reported that the activities of the association had resulted in a surplus for the year of £18,150, being an increase of over £4,000 on the previous year's figure. Distributions to voluntary hospitals during the year amounted to £20,600, and the council had since made further grants of £15,000 to King Edward's Hospital Fund for London and £5,000 to the League of Mercy, the latter for distribution among hospitals outside the London area. The total distributions since the formation of the association four years ago now exceed £173,000.

THE first annual dinner of the Ringer Society was held on December 10th at Jules Restaurant, with Dr. Henry Ellis, in the chair. A large company of guests were present at the invitation of the president and council. The president delivered the Ringer Oration. He explained that the society was named after Sydney Ringer, one of the first clinicians to realize the value of physiology and biochemistry applied to practical medicine, and best remembered perhaps by his perfusion experiments with the fluid bearing his name. Dr. Ellis explained that the council of the society had been actively engaged in formulating standards of urinary analysis, and as a result of team work among different members of the council, working independently, these had been almost completed. He stated that the society would, in the ensuing year, proceed to define standards for blood in the same way. Professor Maclean, in response to the toast of "Clinical Biochemistry," said he was much interested in the evidence presented of the activities of the new society, and Professor Joseph Barcroft of Cambridge also replied. The health of the guests was proposed by Dr. Halls Dally, who said that one of the aims of the society was to study functional efficiency, and Drs. Langdon Brown and C. M. Wilson, who replied, spoke optimistically as to the future of biochemistry applied clinically in the way advocated by the society. The health of the president was proposed by Dr. David Barcroft.

THE KING has appointed Dr. Joseph Clarke McPherson, senior medical officer, to be an official member of the Executive Council of the Presidency of Montserrat.

DR. A. R. WIGHT, who has been elected provost of the burgh of Leslie, has been a member of the Town Council since 1906, with a break of only three years during that period. He graduated M.B., C.M.Edin. in 1897, and is a member of the British Medical Association and the Fife Medical Association.

DR. FREDERICK CHARLES WILLMOT, Government Health Department, Capetown, South Africa, has been elected a Fellow of the Royal Sanitary Institute.

THE Mental After-Care Association for poor persons convalescent or recovered from institutions for the insane is appealing for funds to continue and extend its work. One of its chief objects is the prevention of relapse, and last year 1,660 persons were assisted. Contributions should be sent to the secretary, Miss Vickers, Church House, Dean's Yard, Westminster, S.W.1.

THE Minister of Health has issued a revision of a memorandum, which was first published in March, 1921, and dealt with the provision of treatment for tuberculous ex-service men. In the revised memorandum—30/T (Revised)—it is announced that certain modifications will be introduced on January 1st, 1928. County and county borough councils are now asked to prepare new and authoritative lists of patients whose treatment is chargeable to the Ministry of Pensions, thus correcting the present lists, which, owing to the lapse of time, have become inaccurate. The Ministry of Pensions will continue to notify councils of any fresh cases which from time to time are accepted for financial support by the Ministry. Tuberculosis officers are warned that treatment allowances are not necessarily payable when a man is incapacitated by his war disablement, but only in those cases, now much reduced in number, where a special treatment to be undertaken precludes the man from following his usual occupation. A list of the addresses of the chief area officers accompanies the circular, which has been sent to county councils, county borough councils, and tuberculosis joint committees of England.

BY her will the late Mrs. Marryat has directed that, after paying public bequests amounting to £380,000, the residue of her estate is to be divided into two parts, one of which is to be paid to the governors of the Dundee Royal Infirmary to be funded for the purpose of that institution and the Sidlaw Sanatorium. It is understood that the sum to be funded will yield a very substantial return. Mrs. Marryat had previously given to the Dundee Royal Infirmary £10,000 to clear off the deficit on accounts, and £75,000 to provide an *x*-ray and medical electrical department.

A POST-GRADUATE course in dermatology and syphilis, with special reference to therapeutics, will be held in Vienna from February 13th to 25th. Particulars may be obtained from the secretary of the international post-graduate courses, Dr. A. Kronfeld, Porzellangasse 22, Vienna IX.

THE first international congress of mental hygiene will be held at Washington in April, 1929.

WE have received the first issue, dated September, of *Revista de Neurologia, Psiquiatria y Medicina Legel de Uruguay*, a monthly journal published at Montevideo under the auspices of Dr. Americo Ricaldoni, professor of clinical neurology, and other members of the Montevideo medical faculty. The issue contains original articles on the pathology and treatment of nervous and mental diseases, abstracts from current literature, society intelligence, and medical news.

THE November–December issue of *Norsk Magazin for Laegevidenskaben*, the organ of the Norwegian Medical Society, is dedicated to Dr. F. G. Gade, who has recently retired from the editorship of the journal.

SIR D'ARCY POWER, K.B.E., one of the representatives of the Ministry of Health on the Metropolitan Asylums Board since 1921, has resigned on account of ill health.

Letters, Notes, and Answers.

All communications in regard to editorial business should be addressed to ***The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square, W.C.1.***

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the BRITISH MEDICAL JOURNAL must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the JOURNAL, should be addressed to the Financial Secretary and Business Manager.

The ***TELEPHONE NUMBERS*** of the British Medical Association and the BRITISH MEDICAL JOURNAL are *MUSEUM 9861, 9862, 9863,* and *9864* (internal exchange, four lines).

The ***TELEGRAPHIC ADDRESSES*** are:

EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology Westcent, London.*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*

MEDICAL SECRETARY, *Mediocera Westcent, London.*

The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 4737 Dublin), and of the Scottish Office, 6, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS.

FREQUENCY OF MICTURITION.

DR. J. MCWHIRTER (Auckland, New Zealand) asks for advice in the treatment of intermittent frequency of micturition in a man, aged 48, who is otherwise healthy and able to do an active day's work. The condition commenced about three years ago, without any obvious cause. The attacks of frequency last for several hours or days, during which time the patient may pass urine as often as every hour; the attacks and remissions commence quite suddenly and without any warning signs. Radiological examination of the bladder and urinary tract on two occasions revealed no disease, and the prostate gland is healthy. The urine is normal, except for a trace of albumin and the presence of many coliform bacilli and a few Gram-positive cocci; there is no evidence of venereal disease. Attempts were made to render the urine alkaline, but it only became neutral, and no benefit resulted. Two intravenous injections of a polyvalent *B. coli* vaccine produced transient rises of temperature, but had no other effect on the condition. Alcohol, particularly whisky, brings on an attack almost immediately, but diet seems to bear no relation to the frequency. A cystoscopic examination has not been made.

STERILIZATION OF SYRINGES AND NEEDLES.

MR. F. FOWLER WARD (Ipswich) writes as follows in reply to an inquiry published on November 12th (p. 905) as to the best way of keeping syringes and needles, so that they can be ready for use without sterilizing by boiling:—The following solution is efficient: Lysol 15 minims, ether. sulph. 2 drachms, spirit to the ounce. The spirit should be basic industrial spirit, not methylated—that is, without pyridine; it can be obtained from any wholesale druggist. I have used it for syringes, needles, etc., for the past ten years in the venereal and uro-genital clinics, and no case of sepsis has supervened. It is equally useful for cleansing the skin before puncture or small operations, etc. The used syringe is washed under the tap, a small quantity of the solution drawn up into it, to get rid of moisture, and then ejected, and the syringe replaced in the solution. If a deposit occurs in the solution it can be filtered and used again. If my memory serves me right I saw the formula in the *Clinical Journal*, where it was stated that, as the result of experiment, a syringe that had been used for a virulent culture of *B. coli* was rendered sterile after immersion in the solution for three minutes. This solution is in general use at the East Suffolk and Ipswich Hospital.

CANCER AND DIABETES.

DR. FREDERICK L. HOFFMAN (consulting statistician to the Prudential Insurance Company of America, Newark, New Jersey) writes in reply to "C. H. S." (JOURNAL, October 29th, p. 810), who asked for information concerning the occurrence of carcinoma or other malignant disease in patients suffering from diabetes: In connexion with the San Francisco Cancer Survey I obtained replies from a large number of living cancer patients asking, among other questions, as to whether the patient had suffered or was suffering from diabetes. Out of 834 male cancer patients 13, or 1.6 per cent., were having or had had diabetes, while the percentage for 602 female cancer patients was only 8 cases of diabetes, or 1.3 per cent. The coincidence of cancer and diabetes is, therefore, relatively very small. The foregoing figures are confirmed by further investigations, which will be published in the near future. Full details regarding the cases noted will be found in my fourth report on the San Francisco Cancer Survey.

INCOME TAX.

New Practice.

"A. F." sold his general practice three years ago and started a purely surgical practice. He asks if he is entitled to regard the present practice as a "new" one.

*** Yes: the fact that the general practice was sold should have been sufficient to enable him to show that he was entitled as from the date of sale to exclude "general" practice receipts from his computation of liability.

LETTERS, NOTES, ETC.

BULLOUS ERUPTION AFTER PHENYLCINCHONINIC ACID.

"J. C. M." sends the following note of a bullous eruption following the taking of phenylcinchoninic acid: The patient, a maiden lady of 60, had been in the habit of taking a French proprietary preparation of the drug for attacks of general muscular stiffness and pain up to about twelve months ago. At this time, realizing that she was in for one of her usual attacks, she took three tablets, with potash water, in three doses during the day; in the evening she found that there were large bullae scattered over her face, neck, and the backs of her wrists and hands. A few months later a similar eruption followed the taking of two tablets. Owing to the distribution of the bullae being on areas supplied by C. III to D. I spinal nerves, I had an *x*-ray taken of her cervical vertebrae, and this shows some osteo-arthritis of these vertebrae. About a week ago she asked me if she could take some more of the drug, as she was in considerable pain, and, in view of the radiographic findings, I said that I thought it was just chance that the eruption had followed the dose. However, the bullae appeared after the taking of a single tablet. The question now is, "Do the bullae in any way depend on the ingestion of phenylcinchoninic acid?" I am not satisfied that they are so dependent; and the drug eases the general pain. But I feel diffident in advising her to take it if the bullae are always to occur immediately afterwards, and it will be difficult to convince the patient that it is merely a case of "post hoc." The bullae are not those of *D. herpetiformis*. They are very large, and some of them on the neck will measure as much as 4 in. by 1 in. or 2 in. But they are usually preceded by a pricking and burning of the skin area about to be involved. I should like to know if any of your readers have had a similar experience with phenoquin, atophan, cincophen, or other proprietary preparations of phenylcinchoninic acid.

LONG UMBILICAL CORD COILED ROUND NECK.

DR. J. W. LANG (Anyox, British Columbia) writes: The case of multiple coils about the foetal neck reported on August 27th (page 349) recalls to mind a similar case. A multipara, aged 31, in her third pregnancy, gave birth to a full-term male child weighing 6 pounds in the North Vancouver Hospital. Six coils of the cord were removed from the neck of the child when the head was delivered. Labour was normal, and was not delayed by the mass of cord about the neck. The child was healthy but the cord was very long, about 50 inches, and was somewhat smaller than the average. Dr. Lang adds: It would be interesting to know whether the coils occur because of the great length of the cord, or whether an added length of cord is developed to compensate for that portion taken up by the coils.

A WARNING.

INFORMATION has reached the British Medical Association to the effect that there has lately called upon members of the Association in the Newcastle and Edinburgh districts a man describing himself as a graduate of Edinburgh University, 1918, and using the surname of a respected member of the Association who graduated that year. He said that he had been sent by the Royal Medical Benevolent Fund to Switzerland suffering from tuberculosis, and asked for money. Inquiries made of the Royal Medical Benevolent Fund elicit information to the effect that the Fund has sent no one to Switzerland in the circumstances mentioned. Any reader who may be the recipient of such a visit would be well advised to get into touch at once with the police.

THE Automobile Association road patrols will not be on duty in England, Wales, and Ireland on Christmas Day. During the rest of the holiday season the A.A. road organization will work as usual.

Ephemeris Pharmacologica, issued to the medical profession by Oppenheimer, Son, and Co., Ltd., combines a synopsis of recent literature on the nature and use of drugs with a visiting list, spaces for vaccination and midwifery engagements, and general information likely to be of use to the medical practitioner. The 1928 edition has been carefully revised, and is of convenient size for the pocket.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 29, 30, 31, and 34 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 32 and 33.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 244.